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William L. Butler

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ARISTOTLE's
BOOK OF
PROBLEMS,
WITH OTHER
ASTRONOMERS, } PHYSICIANS,
ASTROLOGERS, } AND
PHILOSOPHERS:

Wherein are contained divers
QUESTIONS AND ANSWERS,
TOUCHING THE
STATE OF MAN'S BODY.
TOGETHER WITH

The Reasons of divers Wonders in the Creation:
the Generation of Birds, Beasts, Fishes, and In-
sects; and many other PROBLEMS on the most
weighty Matters: By way of Question and
Answer.

THE THIRTIETH EDITION.

L O N D O N:

Printed, and Sold by the Booksellers; 1776:

LIST TO THE

BOOK OF

PROBLEMS

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READER,

THES E Problems have been printed very often, and, finding so general an acceptance, divers books have been hoisted into the world under the name of Aristotle, so that many people have bought them, thinking they had the right sort, by which the public has been injured as well as the proprietors.

The matter it contains is necessary for all people to know, and, as man is said to be a microcosm, (or little world,) and in him the Almighty has imprinted his own image so lively, that no power whatsoever is able to blot it out; so this image and similitude are the soul and understanding. And, notwithstanding all the perfections which man hath in himself, few or none take delight in the study of themselves, or are careful to know the substance, state, condition, quality, or use, of the several parts of their own bodies, although they be the honour of nature, and more to be admired than the strangest and rarest wonder that ever happened. I have therefore published this little book, written by Aristotle and the deepest philosophers,
who

who teach the use of all parts of the body, their nature, quality, property, and substance; and question not but it will afford both innocent, necessary, and useful knowledge, and prove profitable to both sexes.

Farewell.

A R I S

ARISTOTLE'S PROBLEMS.

Q. AMONG all living creatures, why hath man only his countenance lifted up towards heaven?

A. Unto this question there are divers answers.

First: it proceeds from the will of the Creator. And, altho' the answer be true, yet in this our purpose, it seemeth not to be of force, because, that so all questions easily might be resolved.

Secondly: I answer, that for the most part, every workman doth make his first work worse, and then his second better; so God creating all other beasts before man, gave them their face looking down to the earth. And then, secondly, he created man, as it doth appear in *Genesis*, unto whom he gave an upright shape, lifted up unto heaven, because it is drawn from divinity, and which is a proof of the goodness of God, who maketh all his works perfect and good.

Thirdly: it is answered, that man only, among all living creatures, is ordained to the kingdom of heaven,

heaven, and therefore hath his face elevated and lifted up to heaven, because that, despising wordly and earthly things, he ought to contemplate on heavenly things.

Fourthly: that the reasonable soul is like unto angels, and finally ordained towards God; as it appears by *Averroes*, in the first *de Anima*; and therefore he hath a figure looking upward.

Fifthly: that man is a microcosm, that is, a little world; as it pleaseth *Aristotle* to say in the eighth of his *Phys.* and therefore he doth command all other living creatures, and they obey him.

Sixthly: it is answered, that naturally there is unto every thing and every work, that form or figure given which is fit and proper for its motion; as, unto the heaven, roundness; to the fire a pyramidical form, that is broad beneath, and sharp towards the top; which form is most apt to ascend: and so man had his face up to heaven, to behold the wonders of God's works.

Q. Why is the head of beasts hairy?

A. The answer, according to the opinion of *Const.* is, that the hairs are an ornament of the head and of the brain; and the brain is purged and evacuated of gross humour, by the growing of the hair, from the highest unto the lowest parts; which pass thro' the pores of exterior flesh, and do become dry, and are converted into hairs. This appears to be true, because that in all men's bodies there is nothing drier than the hairs; for they are drier than the bones, as *Albertus Magnus* doth affirm, because that some beasts are nourished with bones, as dogs; but no beasts can digest feathers or hair, but do void them undigested; and they are not for nutriment.

Secondly: it is answered, that the brain is purged four manner of ways: first, of superfluous watry humour,

humours, by the eyes ; from melancholy, by the ears ; and of choler by the nose ; phlegm, by the hair ; and that is the intent of the physician.

Q. Why have men longer hair on their heads than other living creatures ?

A. *Arist. de Generat. Anim.* says, that men have the moistest brain of all living creatures, from the which the seed proceedeth, which is converted into the long hair of the head.

Secondly : it is answered, that the humours of man are fat, and do not come dry easily, and therefore the hair groweth long in him : in other beasts the hair groweth not so long.

Q. Why doth the hair take deeper root in man's skin than in other living creatures ?

A. Because they have greater store of nourishment in man, and therefore grow more into the inward parts of man. And this is also the reason why in other creatures the hair doth alter and change with the skin, and not in man, unless it be sometimes a scar or wound.

Q. Why have women longer hair than men ?

A. Because women are moister than men, and phlegmatic, and therefore there is more matter of hair in them ; and, by consequence, the length also of their hairs doth follow. And farthermore, this matter is more increased in women than in men, from their interior parts, and especially in the time of their monthly terms, because the matter doth then ascend, whereby the humour which breedeth the hair doth increase. And *Albertus* doth say, that if the hair of a woman in the time of her flowers be put into dung, a venomous serpent is engendered of it.

The second answer is, because women want beards, and so the matter of the beard doth go into the matter of the hair.

Q. Why have some men soft hair, and some hard?

A. We answer, with *Aristotle*, that the hair hath proportion with the skin, of which some is hard, some thick, some subtle and soft, some gross; therefore the hair which groweth out of a thick and gross skin, is thick and gross; and that which groweth of a subtle and fine, is fine and soft; and when the pores are open, then cometh forth much humour, and therefore hard hair is engendered; and, when the pores are strait, then there doth grow fine and soft hair. And this doth *Aristotle* shew in men, in whom we have an eminent token, because women have softer hair than they, because that in women the pores are shut, and are strait by reason of their coldness.

Secondly: because that, for the most part, cholerick men have harder and thicker hair than others, by reason of their heat, and because the pores are ever open in them, and therefore also they have beards sooner than others. Whereupon the philosopher saith, that those beasts which have hard hair are the boldest, because such hair proceedeth of heat and choler, which choler maketh a man fight. *Aristotle* also giveth example in the bear and the boar: and, contrariwise, those beasts that have soft hair are fearful, because they be cold, as the hare and hart. *Aristotle* doth give another reason of the softness and hardness of the hair, drawn from the climate where a man is born; because that in hot regions hard and gross hair is engendered, as it appears in the *Ethiopians*; and the contrary is true in the cold country, or towards the North.

Q. Why have some men curled hair, and some smooth?

A.

A. The answer is, that the cause of the curling of the hair is great abundance of heat; so that, if there be much heat in a man, then the hair doth curl and grow upwards. And a sign of this proved true, because that sometimes a man doth enter into a bath smooth haired, and afterwards by the bath become curled. And therefore the keepers of baths have often curled hair, as also the *Ethiopians* and choleric men. But the cause of the smoothness, is the abundance of moist humours which tend downwards; and a proof of this is, because they have much humidity in them, and small heat.

Q. Why do women shew their ripeness by their hair in their privy parts, and not elsewhere, but men in their breasts?

A. We answer, physician-like; because in men and women there is abundance of humidity in that place, but more in women: because men have the mouth of the bladder in that place where the urine is contained, of which the hair in the breasts is ingendered, and about the navel. But of women it is said, that the humidity of the bladder and the matrix, or womb, is joined, and meeting in that low secret place; and, therefore, is dissolved and separated in that place thro' much vapours and fumes, which are the cause of hair. And the like doth happen in other places where hair is, and under the arms.

Q. Why have not women beards?

A. Because they want heat; as appeareth in some effeminate men, who are beardless for the same cause, because they are of the complexion of women.

Q. Why doth the hair grow in them that are hanged?

A. Because their bodies are exposed to the sun, the which thro' its heat doth dissolve all the moisture

into a fume or vapour, of which the hair doth grow and increase.

Q. Why is the hair of the beard thicker and grosser than elsewhere, and, the more men are shaven, the harder and thicker it groweth?

A. Because, according to the rule of the physicians, by how much more the humour, or vapour of any liquor is dissolved and taken away, by so much the more the humour remaining doth draw to the same; and therefore, by how much the more the hair is shaven, so much the more the humours gather thicker; and of them hair is ingendered, and doth there also wax hard.

Q. Why are women smooth and fair in respect of men?

A. The answer is, according unto *Aristotle de Generat. Animal.* because that in women all humidity and superfluity, which are the matter and cause of the hair of the body are expelled with their monthly terms; the which superfluity remaineth in men, and, thro' vapours, does pass into the hair. And a sign of this is, because women have not any running at the nose, or imposthume or ulcer, but such matter is expelled also. And we see some old women begin to have beards in their old age, that is, after forty or fifty years of age, when their flowers are ceased: as *Aristotle* doth teach, *De Animal. Lib. 9.*

Q. Why doth man only, above all other creatures, wax hoary and grey, as *Pythagoras* and *Aristotle* affirm?

A. The answer: according unto the philosophers, is, because man hath the hottest heart of all living creatures; and therefore nature, being more wise, lest a man should be suffocated thro' the heat of his heart, hath placed the heart, which is most hot,

hot, under the brain, which is most cold; to the end that the heat of the heart may be tempered with the coldness of the brain; and, contrariwise, that the coldness of the brain may be heated with the heat of the heart, and thereby there might be a temperature in both. A sign to prove this is, because that of all living creatures man hath the worst breath, if he come to his full age. Furthermore, man doth consume half his time in sleeping, which doth proceed from the great access of the coldness and moisture of the brain, and by that means doth want natural heat to digest and consume that moistness; the which heat, he hath sufficiently in his youth; and therefore in that age is not grey, but in his old age, when heat faileth; and therefore the vapours ascending from the stomach remain undigested and unconsumed for want of natural heat, and then putrify; of which putrification of humours the whiteness doth follow, which is called greyness or hoariness. Whereby it doth appear, that hoariness is nothing else but a whiteness of hair, caused by the putrification of humours about the roots of the hair, thro' the want of natural heat in old age. Sometimes also greyness is caused by the naughtiness of the complexion, which may well happen in youth; and sometimes by reason of the moisture undigested; and sometimes thro' over great fear and care, as it appeareth in merchants, sailors, and thieves; from whence cometh this verse:

Cura facit canos, quamvis homo non habet annos.

Q. Why doth red hair grow white sooner than other?

A. According to the opinion of *Aristotle*, because redness is an infirmity of the hair, for it is ingendered of a weak and infirm matter; that is to say, of matter corrupted with the flowers of the wo-

men, and therefore it waxes white sooner than black hair.

Q. Why do wolves grow grisly?

A. This question does not relate to the difference between greyness and grisliness; because that greyness is caused thro' the defect of natural heat, but grisliness thro' devouring and eating, as *Aristotle* witnesseth, 7 *De Animal*. The wolf being a devouring beast, and an eater, he letteth it down gluttonously without chewing, and that at once enough for three meals, of which meat gross vapours are ingendered in the wolf's body; and by consequence grisliness. Secondly: greyness and grisliness do differ, because greyness is only in the head, and grisliness over all the body.

Q. Why do horses grow grisley and grey?

A. According to *Aristotle*, because they are for the most part in the sun; and, in his opinion also, heat doth accidentally cause putrification; and of that kind of heat the matter of hair doth putrify; and by consequence, they are quickly pilled.

Q. Why do men become bald, and trees shed their leaves in winter?

A. *Aristotle* doth give the same reason for both; because that the want of moisture, in both, is the cause of the want of the hair, and of the leaves; and this is proved, because that a man becometh bald thro' venery; because that lechery is letting forth of natural humidity and heat. And so, by that excess in carnal pleasure, moisture is consumed, which is the nutriment of the hair, and therefore baldness doth ensue. And this is evidently proved in eunuchs and women, which do not grow bald; because they do not depart from their moistness, and therefore eunuchs are of the complexion of women. But if you ask why eunuchs be not bald, nor have the
 1. gout,

gout, as *Hippocrates* saith, the answer is, according unto *Galen*, because the cause of baldness is dryness, the which is not in eunuchs, because they want their stones, the which do minister heat unto all the parts of the body, and the heat doth open the pores; which being open, the hair doth fall.

Q. Why are not women bald?

A. Because they are cold and moist; which are the cause that the hair remaineth; for moistness doth give nutriment to the hair, and coldness doth bind the pores.

Q. Why are bald men deceitful? according to the verse,

Si non vis fulli, fugias consortia calvi.

A. Because baldness doth witness a cholerick complexion, which is hot and dry: and cholerick men are naturally deceitful, according to the verse,

Hirsutus, fallax, irascens, prodigus, audax,

And therefore it followeth, *a primo ad ultimum*, that bald men are deceitful and crafty,

Q. Why are not blind men naturally bald?

A. Because that, according unto Aristotle, the eye hath most moisture in it; and that moisture, which should pass through by the substance of the eyes, doth become a sufficient nutriment of the hair, and therefore they are seldom bald.

Q. Why doth the hair stand on end when men are afraid?

A. Because, in the time of fear, the heat doth go from the outward part of the body unto the inward, to the intent to help the heart, and so the pores, in which the hairs are fastened, are shut up; after which stopping and shutting up of the pores, the standing
up

up of the hair doth follow, as it is seen in beasts, as dogs, wild boars, and peacocks.

OF THE HEAD.

Q. WHY is a man's head round?

A. Because this is most fit to receive any thing into it, as Aristotle doth affirm, *Lib. de Cael.* and the head doth contain in it five senses. This is also seen in a material sphere.

Q. Why is the head round?

A. Aristotle saith, because it doth contain in it the moisteit parts of the living creatures, and also because the brain may be defended thereby as with a shield.

Q. Why is the head absolutely long, but somewhat round?

A. To the end the three creeks and cells of the brain might the better be distinguished; that is, the fancy in the forehead, the discoursing or reasonable part in the middle, and memory in the hinder most part.

Q. Why doth a man lift up his head towards the heavens when he doth imagine?

A. Because the imagination is in the fore-part of the head, or brain; and therefore it listeth up itself that the creeks or cells of the imagination may be opened; and that the spirits, which help the imagination, and are fit for that purpose, having their concourse thither, may help the imagination.

Q. Why doth a man, when he museth, or thinketh on things past, look down towards the earth?

A. Because the cell, or creek, which is behind, is the creeks or chamber of memory, and therefore that looketh toward heaven when the head is bowed down; and so that cell is open, to the end that the spirits, which perfect the memory, should enter in.

Q. Why

Q. Why is not the head fleshy, like unto the other parts of the body?

A. Because that, according to Aristotle, the head would be too heavy, and would not stand steadfastly; and therefore it is without flesh. Also a head loaded with flesh doth betoken an evil complexion.

Q. Why is the head subject to aches and griefs?

A. According unto Constant. by reason evil humours, which proceed from the stomach, ascend up to the head and disturb the brain, and so cause the pain in the head. And sometimes it proceeds from overmuch filling the stomach; because, according unto the opinion of Galen, two great sinews pass from the brain to the mouth of the stomach; and therefore these two parts do suffer grief always together. Sometimes the achedoth proceed of drinking strong wine, of fuming meats, as garlic, or onions; and sometimes of phlegm in the stomach, whereof spring quotidian fevers.

Q. Why have women the head-ache more often than men?

A. Albertus saith, that it is by reason of their monthly terms, which men are not troubled with; and so a moist, unclean, and venomous fume is dissolved, the which, seeking passage upward, doth cause the head-ache.

Q. Why is the brain white?

A. There are two answers; the first, because it is cold, and coldness is the mother of white. The philosophers do teach the second, because it may receive the similitude and likeness of all colours, which the white colour can best do, because it is most simple.

Q. Why are all the senses in the head?

A. Because (as *Albertus* saith) the brain is there, on which all the senses do depend, and are directed by it;

and, by consequence, maketh all the spirits to feel, and by it all the remembrances are governed.

Q. Why cannot a man escape death, if the brain or head be hurt?

A. Because the heart and brain are two of the principallest parts which concern life, and therefore, if they be hurt, there is no remedy left for cure.

Q. Why is the brain moist?

A. Because it may easily receive an impressiō, which moisture can best do, as it appeareth in wax, which doth easily receive the print or the seal when it is soft.

Q. Why is the brain cold?

A. This is answered two ways: first, because that by this coldness it may clear the understanding of a man, and make it subtile. Secondly, that by the coldness of the brain the heat of the heart may be tempered; and this is *Aristotle's* intent, *Lib. de Animal.*

OF THE EYES.

Q. WHY have men one nose and two eyes?

A. Because our sight is more necessary for us than the smelling: and therefore it doth proceed from the goodness of nature, that if we receive any hurt or loss of one eye, yet the other should remain unto the which, the spirit with which we see, called *Spiritus Visus*, is directed when the other is out, as is plain in the common perspective.

Q. Why have children in their youth great eyes, and why do they become smaller and less in their age?

A. According to *Aristotle de Generat.* it proceedeth from the great humidity of the brain, and for the same cause children are very sleepy.

Q. Why do black eyes see well in the day-time, and bad by night?

A.

A. According to that opinion of *Aristotle*, it proceedeth from the want of fire, and from the assembling and meeting together of light and humour; the eyes are lightened by reason of the sun which doth lighten the easy humour of the eye, and purge it; and, in the absence of the sun, those humours become dark and black, and therefore the sight not so good.

Q. Why do the blueish-grey eyes see badly in the day-time, and well in the night?

A. Because (saith *Aristotle*) greyness is light and shining of itself, and the spirits, with which we see, are weakened in the day-time and strengthened in the night.

Q. Why be men's eyes of divers colours?

A. This proceedeth, saith *Aristotle*, by reason of the diversity of the humours. The eye therefore hath four coverings and three humours: the first covering is called consolidative, which is the outermost, and is strong and fat. The second is called a horny skin and covering, to the likeness of a horn; and that is a clear covering. The third is called Uvea, of the likeness of a black grape. The fourth is called a cobweb. But, according to the opinion of some, the eye doth consist of seven coverings or skins, and three humours. The first humour is called albuginous, for the likeness unto the white of an egg. The second glaciell, that is, clear like unto ice, or crystalline. The third vitreous, that is, clear as glass. And the diversity of humour causeth the diversity of the eyes.

Q. Why are men, which have but one eye, good archers? And why do good archers commonly shut one eye? And why do such as behold the stars look through a trunk with one eye?

A. This matter is handled in the perspective art; and the reason is, as it doth appear in the book of causes

causes because that every virtue or strength, united and knit together, is stronger than itself dispersed and scattered. Therefore all the force of seeing dispersed in two eyes, the one being shut, is gathered into the other; and so the light is fortified in him; and, by the consequence, he doth see better and more certainly with one eye being shut, than one being open.

Q. Why do such as drink much, and laugh much, shed tears?

A. Because that, whilst they drink and laugh without measure, the air which is drawn in doth not pass out through the windpipe, and so with force is directed and sent to the eyes; and by their pores passing out doth expel the humours of the eyes; the which humours, being so expelled, do bring tears.

Q. Why do such, as weep much, urinate but little?

A. Because (saith *Aristotle*) the radical humidity of a tear, and of urine, is of one and the same nature. And therefore where weeping doth increase, their urine doth diminish; and that they be of one nature is plain to the taste, because they are both salt.

Q. Why do some that have clear eyes see nothing at all?

A. By reason of the oppilation and naughtiness of the sinews with which we see. For, the temples being destroyed, the strength of the light cannot be carried from the brain to the eye, as the philosopher doth teach, *Lid. de Sen. & sensat.*

Q. Why is the eye clear and smooth like unto a glass?

A. Because the things, which may be seen, are better beaten back from a smooth thing than otherwise, that thereby the sight should strengthen.

Secondly,

Secondly, I answer, it is because the eye is moist above all parts of the body, and of a waterish nature; and, as the water is clear and smooth, so likewise is the eye.

Q. Why do men, which have their eyes deep in their head, see well afar off? and the like in beast?

A. Because (saith *Aristotle*, 2 de Gener. Animal.) the force or power, which we see is dispersed in them, doth go directly to the thing which is seen.

And this is proved by a similitude; because that when a man doth stand in a deep ditch, or well, he doth see in the day-time, standing in those places, the stars of the firmament: as *Aristotle* doth teach in his treatise, De forma Speculi; because that then the power of the sight and of the beams is not scattered.

Q. Wherefore do those men which have their eyes far out, and not deep in their heads, see but meanly, and not far distant?

A. Because (saith *Aristotle*) the beams of the sight, which pass from the eye, are scattered in every side, and go directly unto the thing that is seen, and therefore the sight is weakened.

Q. Why are many beasts born blind, as lions whelps, and dogs whelps?

A. Because such beasts are not as yet of perfect ripeness and maturity, and the course of nutriment doth not work in them. And this is proved by a similitude of the swallow, whose eyes, if they were taken out when they are little ones in the nest, would grow again; and this is plain in many others beasts, which are brought forth, before their time, as it were dead, as bears whelps. And this reason doth belong rather to the perspective, than the natural philosopher.

Q. Why do the eyes of the women that have their

their flowers stain a new glass? as Aristotle saith de somno, & Virgil. And this is the like problem, Why doth a basilisk kill a man with his sight?

A. To the first I answer, that, when the flowers do run from a woman, then a most venomous air is dissolved in them, which doth ascend unto the woman's head; and the having grief of her head, doth cover it with many veils and kerchiefs; and because the eyes are full of small insensible holes, which are called pores, there the air seeketh a passage, and so doth infect the eyes, which are full of blood. And their eyes do appear also drooping and full of tears, by reason of the evil vapour that is in them; and those vapours are incorporated and multiplied, until they come unto the glass before them, and, by reason that such a glass is found, clear, and smooth, it doth easily receive that which is unclean.

To the second it is answered, that the basilisk is a very venomous and infected beast, and there pass from his eyes venomous vapours, which are multiplied upon the thing which is seen by him, and even unto the eye of man: the which venomous vapours of humours, entering into the body, do infect him; and so in the end the man dieth. And this is also the reason why the basilisk, looking upon a shield, perfectly well made with fast clammy pitch or any hard smooth thing, doth kill himself, because the humours are beaten back from the smooth hard thing unto the basilisk, by which beating back he is killed. And the like is said of a woman when she hath her monthly disease; whereof it followeth, that some old women do hurt themselves when they look upon glasses, or other firm and solid things, in the time of their terms.

Q. Why are not sparkling cats eyes, and wolves eyes, seen in the light, and not in the dark?

A. Because that the greater light doth darken the less; and therefore, in a greater light, the sparkling cannot be seen; but, the greater the darkness, the easier it is seen, and is made more strong and shining, because it is not then hindered by a greater external light which might darken it.

Q. Why doth a man, beholding himself in a glass, presently forget his own disposition?

A. Answer is made in *Lib. de Forma Speculi*. That the image, seen by the glass, doth represent it weakly and indirectly to the power of the sight; and because it is represented weakly, it is also weakly apprehended, and by consequence is not long retained.

Q. Why is the sight recreated and refreshed by a green colour, as this verse sheweth?

Fons, speculum, gramen, oculis sunt alleviamentum.

A. Because the green colour doth meanly move the instrument of sight, and therefore doth comfort the sight; but this do not black or white colours; because these colours do vehemently stir and alter the organ and instrument of the sight, and therefore make the greater violence; but, by how much the more violent the thing is which is felt or seen, the more it doth destroy and weaken the sense, as *Aristotle* doth teach, *Lib. 2. de Animal.*

OF THE N O S E.

Q. WHY doth the nose stand out farther than other parts of the body?

A. There are two answers: the first, because the nose is as it were the sink of the brain, by which the phlegm of the brain is purged; and therefore it doth stand forth, lest the other parts should be defiled. The second, (according to *Constant*) is because

cause the nose is the beauty of the face, and therefore it doth shew itself, and shine. It doth smell also, and adorn the face; as *Batus* saith, *Discip. Schol.*

Q. Why hath man the worst smell of all living creatures? as it doth appear, *Lib de Animal.*

A. Because man, (as the commentator saith) in respect of his quantity, hath the most brain of all creatures. And therefore, by that exceeding coldness and moistness, the brain wanteth a good disposition, and by consequence the smelling, seeing the instrument is not good, as *Aristotle* and *Themistocles* do teach; yea, some men there be which do not smell at all.

Q. Why do the vulture and cormorant smell very well, as the commentator doth say?

A. Because they have a very dry brain, and therefore the air, carrying the smell, is not hindered by the humidity of the brain, but doth presently touch his instrument; and therefore he saith, that the vultures, tygers, and other beasts, came five hundred miles to the dead bodies, after a battle in Greece.

Q. Why did nature make the nostrils?

A. For three commodities; first, because that, the mouth being shut, we draw breath in by the nostrils to refresh the heart with: the second commodity is, because that the air, which proceedeth from the mouth, doth savour badly, because it doth savour of the vapours which rise from the stomach; but that which we breathe from the nose is not noisome. The third is, because the phlegm which doth proceed from the brain is purged by them.

Q. Why do men sneeze?

A. Because, by the expulsive virtue or power, the sight should thereby be purged, and the brain
also,

also, from superfluities; because, as the lungs are purged by coughing, so are the sight and brain by sneezing: and those which sneeze often, are said to have a strong brain; and therefore the physicians give sneezing medicaments to purge the brain; and such sick persons as cannot sneeze die quickly, because it is a sign their brain is wholly stuffed with evil humours, which cannot be purged.

Q. Why do such as are apopleptic sneeze, that is, such as are subject easily to bleed?

A. Because the passages and ventricles of the brain are stopped in them; and, if they could sneeze, their apoplexy would be loosened.

Q. Why doth the heat of the sun provoke sneezing, and not the heat of the fire?

A. Because the heat of the sun doth dissolve and not consume; and therefore, the vapour dissolved is expelled by sneezing; but the heat of the fire doth dissolve and consume, and therefore rather doth hinder sneezing than provoke.

OF THE E A R S.

Q. WHY do beasts move their ears, and not men?

A. Because there is a certain muscle, near unto the jaw, which doth cause motion in the ear; and therefore, that muscle being extended and stretched, men do not move their ear, as it hath been seen in divers men; but all men do use that muscle or fleshy sinew, and therefore do move their ears.

Q. Why is rain prognosticated by the pricking up of the asses ears?

A. Because the ass is a very melancholy beast, and it proceedeth from melancholy that he doth foresee rain to come: in the time of rain all beasts do prick up their ears, and therefore the ass, perceiving that it will rain, doth prick up his ears before it comes.

Q. Why have some beasts no ears?

A. *Aristotle* doth answer and say; that nature doth give unto every thing that which is fit for it; but, if she should have given birds ears, their flying would have been hindered by them; likewise fish do want ears, because they would hinder their swimming; and have only certain little holes thro' which they hear, as *Aristotle* declares by the sea-calf.

Q. Why have bats ears, seeing they seem to be birds?

A. Because they are partly birds by nature, in that they do fly, by reason whereof they have wings, and partly they are hairy, because they are mice; therefore nature, as being wise, gave them ears.

Q. Why hath man only round ears?

A. Because the shape of the whole and of the parts should be proportionable, and especially in all things of one nature; for as a drop of water is round, so the whole water, *Joh. de sacro Bosco* doth prove. And so, because a man's head is round, the ears incline towards the same figure; but the heads of beasts are somewhat long, and so the ears are drawn into length also.

Q. Why did nature give living creatures ears?

A. For two causes: first, because with them they should hear. Secondly, because that by the ears choleric superfluity is purged; for as the head is purged of phlegmatic superfluity by the nose, so from choleric by the ears.

OF THE M O U T H.

Q. WHY hath the mouth lips to compass it?

A. According to *Const.* because they do cover and defend the teeth; it were unseemly that the teeth should always be seen. Another answer is, that the teeth are of a cold nature, and would

would therefore be soon hurt, if they were not covered with lips. Another moral reason is, because a man should not be too hasty of speech.

Q. Why hath a man two eyes, two ears, and but one mouth?

A. Because a man should speak but little, and see and hear much. And withal, *Aristotle* doth say, that the hearing in the light doth shew us the difference of many things; and *Seneca* doth agree unto this, affirming, that nature environed the tongue with a double cloister, and teeth, and lips, and has made the ears open and wide, and has given us but one mouth, to speak little, tho' we hear much.

Q. Why hath a man a mouth?

A. For many commodities: 1. Because the mouth is the gate and door of the stomach. 2. Because the meat is chewed in the mouth, and prepared and made ready for the first digestion, altho' *Avicen.* doth hold, that the first digestion is made in the mouth. 3. Because that the air, drawn into the hollow of the mouth for the refreshing of the heart, is made more pure and subtle. And for many other causes, which shall hereafter appear.

Q. Why are the lips moveable?

A. Because of forming the voice and words, which cannot be perfectly done without them. For as, without a, b, c, there is no writing, so without the lips no voice can be well formed.

Q. Why do men gape?

A. The gloss upon the last part of *Hippocrates's* Aphorisms, saith, that it proceeds of wearisomeness; as when a man sitteth among such as he doth not know, whose company he would willingly be rid of. Besides gaping is caused by the thick fume and vapour which fill the jaws; by the expulsion of which, is caused the stretching out and expulsion

sion of the jaws, and opening of the mouth, which is called gaping.

Q. Why doth a man gape when he seeth another man gape?

A. This proceedeth of imagination. And this is proved from a similitude; for an ass is *animal valde sensibile*, by reason of his melancholy, because he doth retain his superfluity a long time, and would neither eat nor piss, unless he should hear another piss. And so a man gapes thro' imagination, when another man doth gape.

OF THE T E E T H.

Q. **W**HY do they only, amongst all other bones, feel the sense of feeling?

A. Because (as *Avicen.* and *Galen* do say) they might discern of heat and cold, which hurts them, which other bones need not.

Q. Why have men more teeth than women?

A. By reason of the abundance of heat and blood, which is more in men than in women.

Q. Why do the teeth grow to the end of our life, and not the other bones?

A. Because otherwise they would be consumed with chewing and grinding.

Q. Why do teeth only come again when they fall, or be taken out, and other bones taken away grow no more?

A. Because that, according unto *Aristotle*, all other bones are ingendered of the humidity which is called radical, and so they breed in the womb of the mother, but the teeth are ingendered of nutritive humidity, which is renewed and increased from day to day.

Q. Why do the fore-teeth fall in youth, and grow again, and not the cheek-teeth?

A.

A. This proceedeth of the defect of matter, and of the figure, because the fore-teeth are sharp, and the other broad. But according to *Aristotle*, there is another answer; that is, that it is the office of the fore-teeth to cut the meat, and therefore they are sharp; and the office of the other to chew the meat, and therefore they are broad in fashion, which is fittest for that purpose.

Q. Why do the fore-teeth grow the soonest?

A. Because we want them sooner in cutting, than the other in chewing.

Q. Why do teeth grow black in the old age of living creatures?

A. This proceedeth of the corruption of the meat, and the corruption of phlegm, with a naughty cholic humour.

Q. Why are colts teeth yellow, and of the colour of saffron when they are young, and wax white when they be old?

A. *Aristotle* saith, that a horse hath abundance of watery humours in him, which in his youth are digested and converted into grossness; but in old age heat is diminished, and the watery humours remain, whose proper colour is white.

Q. Why did nature give living creatures teeth?

A. *Aristotle* saith (*Lib. de Generat. Animal*) unto some to fight with, and for defence of their life, as unto wolves and bears; unto some to eat with, as unto horses: unto some for the forming of their voice, as unto men, as it appeareth by the commentary in the book, *De Animal*.

Q. Why do horned beasts want their upper cheek-teeth?

A. According to *Aristotle*, in his book, *De Animal*. horns and teeth are caused of the self same matter, that is, of nutrimental humidity; and there-

therefore the matter which passeth into horns turneth not into teeth, consequently such beasts want the upper teeth ; and, according unto *Aristotle*, they cannot chew well ; whereupon, for want of teeth, they have two stomachs, and so by consequence chew their meat twice. They first convey their meat into their first stomach or belly, and then return it from whence it came, and chew it.

Q. Why are some creatures brought forth with teeth, as kids and lambs, and some without, as men?

A. Nature doth not want in things necessary, nor abound in things superfluous ; and therefore, because those beasts, not long after they be fallen, do need teeth, they are fallen with teeth ; but men are nourished with their mother's dugs for a time, and therefore for a time want teeth.

Q. Why have not birds teeth ?

A. Because the matter of teeth passeth into their beak, and therefore there is their digestion : or else it is answered, that, altho' they do not chew with teeth, yet their head in digestion doth supply the want of teeth.

OF THE TONGUE.

Q. **W**HY is the tongue full of pores ?

A. According to *Aristotle de Animal*, because the tongue is the means whereby we taste, and thro' the mouth, in the pores of the tongue, the taste doth come unto the sense of tasting. Otherwise it is answered, that frothy spittle is sent into the mouth by the tongue from the lungs, moistening the meat, and making it ready for the first digestion ; and therefore the tongue is full of pores, because many have a passage thro' it.

Q. Why doth the tongue of such as are sick of agues judge all things bitter?

A. Because the stomach of such persons is filled with cholerick humours ; and choler' is very bitter,

as it appeareth by the gall, and therefore this bitter fume doth infect the tongue, and so the tongue being full of these tastes, doth judge them bitter, altho' the bitternefs be not in the meat, but in the tongue.

Q. Why doth the tongue water when we hear four and sharp things named ?

A. Because the imaginative virtue or power is of greater force than the power or faculty of tasting ; and, when we imagine a taste, we conceive it by the power of tasting, as by a mean, because there is nothing felt by the taste, but by means of that spittle the tongue doth water.

Q. Why do some stammer, and some lisp ?

A. This happeneth from many causes ; sometimes thro' the moistness of the tongue and brain, as in children, which cannot speak plainly, nor pronounce many letters. Sometimes it happeneth by the reason of the shrinking of certain sinews, which are corrupted with phlegm : for such sinews there be which go to the tongue.

Q. Why are the tongues of serpents and mad dogs venomous ;

A. Because of the malignity and tumosity of the venomous humour which doth predominate in them.

Q. Why is a dog's tongue fit and apt for medicine, and contrariwise, a horses tongue pestiferous ?

A. It is by reason of some secret property ; or else it may be said, the tongue of a dog is full of pores, and so doth draw and take away the viscosity of the wound. Some say that a dog hath by nature some humour in his tongue, with the which, by licking, he doth heal ; the contrary is in a horse.

Q. Why is spittle white ?

A.

A. By reason of the continual moving of the tongue, whereof heat is engendered, which doth make white this superfluity, which is called spittle; as is seen in froth of water.

Q. Why is spittle unsavory and without taste?

A. If it had a certain determinate taste, then the tongue would not taste at all, but should only have the taste of spittle, and so could not receive other tastes.

Q. Why doth the spittle of one that is fasting heal an imposthume?

A. Because (according to *Avicen.*) it is well digested, and made subtle.

Q. Why do some abound in spittle more than others?

A. This doth proceed from a phlegmatic complexion which doth predominate in them; and therefore, the physicians do say, that such should take heed of a quotidian ague, which ariseth from the predomination of phlegm; the contrary in those that spit little, because heat abounds in them, which consumes the humidity of the spittle; and so the defect of spittle is a sign of fever.

Q. Why is the spittle of a man that is fasting more subtle than of one who is full?

A. Because that the spirit is without the viscosity of meat, which is wont to make the spittle, of one who is full, gross and thick.

Q. From whence proceedeth the spittle of man?

A. From the froth of the lungs; which, according to the physicians, are the seat of phlegm.

Q. Why are such beasts, as often go together for generation, very full of foam and froth?

A. Because that then the lights and the heart are

are in great motion of lust, therefore there is ingendered in them much frothy matter.

Q. Why have not birds spittle?

A. Because they have very dry lungs, according unto Aristotle in his fifth book, De Animal.

Q. Why do such as are called epileptici, that is, such as are over whelmed, and as it were drowned, in their own blood, and are diseased, favour badly and corruptly?

A. The answer, according to the physicians, is, because the peccant matter lieth in the head; but, if he do vomit, then the matter is in the stomach; but, if he piss much, then the matter is in the passage of the urine; but, if they begin to seed, then it is in the vessels of the seed, and, according to this the physicians do purge them.

Q. Why doth the tongue lose sometimes the use of speaking?

A. The answer is out of *Hippoc.* that this doth happen through a palsy or apoplexy; that is, a sudden effusion of blood and of a gross humour; and sometimes also by infection of Spiritus animalis in the middle cell of the brain, which hinders that spirit's being carried to the tongue; and so is Galen's meaning; for by the expression of the tongue many actions of divers passions are made manifest.

OF THE ROOF OF THE MOUTH.

Q. WHY are the fruits, before they be ripe, of a naughty relish, or bitter, and, after, sweet?

A. A naughty relish in taste proceedeth of coldness and want of heat, in gross and thick humidity; but a sweet taste proceedeth of sufficient heat; and therefore in the ripe fruit the humidity is subtle through the heat of the sun; and therefore such fruits are commonly sweet; but before they

they be ripe, and the humidity is gross or subtile for want of heat, the fruit is bitter and sour.

Q. Why are we better delighted with sweet tastes, than with bitter, or any other?

A. Because nature is delighted with sweetness; the reason is, because a sweet thing is hot and moist, and through the heart doth dissolve and consume superfluous humidities; and, by this humidity, immundicity is washed away; but a sharp eager taste, by reason of the cold which predominates in it, doth bind over much, and prick and offend the parts of the body in purging; and therefore we do not delight in that taste, because the physicians counsel us to eat nothing that is bitter in the summer, nor in a great heat; and the reason is, because bitternefs doth breed heat; but we should eat bitter things in winter only, and therefore *Aristotle* doth say, that sweet things are grateful unto nature, and do greatly nourish.

Q. Why doth a sharp taste, as of vinegar, provoke appetite rather than any other?

A. Because it is cold, and doth cool. Now it is the nature of cold to desire and draw, and therefore is cause of appetite. Mark, that there are nine kinds of tastes; three which proceed from heart, three from cold, and three from a temperate mean.

Q. Why do we draw in more air than we breathe out?

A. *Aristotle*, and *Albertus*, in the book *De Motu Cordis*, do answer, that much air is drawn in, and so converted into nutriment, which together with the vital spirits is contained in the lungs. Wherefore a beast is not suffocated, so long as he receives air with the lungs, in which some part of the air remaineth also.

Q. Why doth the air seem to be expelled and put forth, seeing that indeed the air is invisible, by reason of its variety and thinness? A.

A. Because the air, which is received in us, is mingled with vapours and fumosity of the heart, by reason whereof it is made thick, and so is seen. And this is proved by experience, because that in winter we see our breath; for the coldness of air doth bind the breath mixed with fumosities, and so it is thickened and made gross, and by consequence is seen.

Q. Why have some men stinking breath?

A. The answer is, according to the physicians, because there rise evil fumes from the corruption of the breath of lepers is so infected, that it doth poison the birds that are near them, because inward parts are very corrupt, as appears by *Const. de Sin.* Now, the leprosy is a nourishment of all the parts of the body together with a corrupting of them; and it doth begin in the blood and exterior members of the body.

Q. Why are leapers hoarse?

A. Because that in them the instruments vocal are corrupted; that is, the lights.

Q. Why do men become hoarse?

A. Because of the rheum descending from the brain, filling the conduit of the lights, or sometimes through some imposthumes of the throat or rheum gathering in the neck.

Q. Why have females of all living creatures the shrillest voice, a crow only excepted, and a woman shriller than a man and smaller?

A. According to *Aristotle*, by reason of the composition of the veins and formation of the vocal arteries of voice, as appear by a similitude, because a small pipe sounds shriller than a great. And also, in woman, because the passage, where the voice is formed, is made narrow and strait, by reason of cold, it being the nature of cold to bind; but in
men

men the passage is open and wider through heat, because it is the property of heat to open and dissolve. It proceedeth in women through the moistness of the lungs, and weakness of heart. Young men, and diseased, have sharp and shrill voices for the same cause. And this is the natural cause why a man-child at his birth-time doth cry *a*, which is a bigger sound, and the female, *e*, which is a slender sound, as *Libertinus* asserts, when he saith, *Masculus a profert*.

Q. Why doth the voice change in men and women; in men at 14, in women at 12? in men when they begin to yield seed, in women when the breasts begin to grow? as *Aristotle* says, *L. de Animal*.

A. Because then, saith *Aristotle*, the beginning of the voice is slackened and loosened; and he proves this by a similitude of an instrument let down or loosened, which gives a great sound. He proves it another way, because creatures, which are gelded, as eunuchs, capons, &c. have softer and slenderer voices than others, by reason they want stones.

O. Why is not a wolfe hoarse when a man looks on him?

A. Because a man is not so cold as a wolf, nor of so malignant a quality.

Q. Why doth a man, which is slain, bleed when he is seen of him who killed him?

A. This proceedeth of divine cause, and not of a natural, because his blood calleth for vengeance against the murderer; but, if there be any natural cause of it; it is this: the committer of this wicked fact, calling it to mind, is very sorry for it, and repents him of it, is in anguish of mind, and in a great heat thro' the imagination he hath conceived, and by that means all his spirits do stir and boil, and repair into the instruments of the sight, and so

go out, by the beams of the sight of the eyes, unto the wounds which are made, which, if they be fresh, do presently fall to bleeding. Besides this is done by the help of the air then breathed in, which, being drawn from the wound, causeth it to bleed.

Q. Why do small birds sing more and louder than great ones, as appears in the lark and nightingale?

A. Because the spirits of small birds are subtle and soft, and the organ conduit strait, as appeareth in a pipe, and therefore they follow easily any desire, and so do sing very soft.

Q. Why doth the male sing more than the female, as appeareth in all living creatures?

A. It proceedeth from a desire of carnal copulation, because that then the spirits are moved throughout all the body with the aforesaid appetite and desire. And, generally speaking, the females are colder than the male.

Q. Why do bees, wasps, flies, locusts, and many other such like insects, make a noise, seeing they have no lungs, nor instruments of the voice?

A. According to *Aristotle*, there is in them a certain small skin, which when the air doth strike, it causeth the sound, and there is a strange sound.

Q. Why do not fish make a sound?

A. Because, according to *Aristotle*, they have no lungs, but only gills, nor yet a heart; and therefore they need not the drawing in of the air, and by consequence they make no noise, because that (according to *Aristotle*) a voice is a percussion of the air which is drawn.

OF THE N E C K.

Q. **W**HY hath a living creature a neck?

A. Because the neck is the supporter of the head, as *Aristotle* teacheth, and therefore the neck.

neck is the middle between the head and the body, to the intent that by it, and by its sinews, as by certain means and ways, motion and sence of the body might be conveyed throughout all the body; and that, by means of the neck, as it were by a distance, the heart, which is very hot, might be separated from the brain.

Q. Why do some beasts want necks, as serpents and fishes?

A. Because such beasts want a heart, and therefore they want that distance which we have spoken of; or else we answer, they have a neck in some inward part of them, but it is not distinguished outwardly from the heart to the head.

Q. Why is the neck full of bones and joints?

A. Because it may bear and sustain the head the stronger; also because the back-bone is joined to the brain in the neck, and from thence it receives marrow, which is of the same substance with the brain.

Q. Why have some beasts long necks, as cranes, starks, and such like?

A. Because such beasts do seek their living in the bottom of the water, and therefore have such necks; and some beasts have short necks; as sparrow-hawks, &c. because such are ravenous beasts, and therefore for strength have short necks; as appeareth in the ox, which hath a short neck, and therefore strong.

Q. Why is the neck hollow, and especially before, about the tongue;

A. Because there are two passages, whereof the one doth carry the meat unto the nutritive instrument, as to the stomach and liver, and is called of the Greeks *Oesophagus*; and the other is the wind pipe.

Q. Why

Q. Why is the artery made with rings and circles?

A. The better to bow and give a good sounding again.

Q. Why doth a chick move a good space after his head is off, when a man beheaded never stirreth?

A. Because a chick, and such like, have streight sinews and arteries, and therefore the spirit of moving continueth long after the head is off: but men, and many beasts, have long and large sinews and arteries, and therefore the motive spirits do quickly depart from them, and so by consequence cannot move their bodies.

OF THE SHOULDERS AND ARMS.

Q. WHY hath a man shoulders and arms?

A. To give and carry burdens, according to Aristotle.

Q. Why are his arms round?

A. For the swifter and speedier work, because that figure is fittest to move.

Q. Why are his arms thick?

A. Because they should be strong to lift and bear burthens, or thrust and give a strong blow: for their bones are thick, because they contain much marrow, for fear they should be easily corrupted and marred; but marrow cannot so well be contained in small bones as in great.

Q. Why do such as are diseased; and in grief, uncover and cover their arms, and such also as are in agony?

A. Because such are near unto death; and it is a sign of death, by reason of great grief, which causeth that uncovering, as Hippocrates doth teach, Lib. Prognost.

Q. Why do the arms become small and slender in some sicknesses, as in madmen and such as are sick of the dropsey?

A.

A. Because all the parts of the body do suffer the one with the other, and therefore, one member being in grief, all the humours do concur and run thither to give succour and help to the aforesaid grief. For, when the head doth ache, all humours of the arms do run into the head, and therefore the arms become small and slender, because they want their proper nutriment.

Q. Why have brute beasts no arms?

A. Their fore-feet are instead of arms, and in their place. Or else we may answer more fitly, because all beasts have some part for their defence and to fight with, as the wolf his teeth, the cow her horns, the horse his hinder feet, birds their beak and wings, but only man hath his arms.

OF THE HANDS.

Q. FOR what use hath a man hands, and an ape also, which is like unto a man?

A. The hand is an instrument which man doth especially make use of, because many things are done by the hands, and not by any other part, as Aristotle doth teach.

Q. Why are some men ambidexter, that is, using the left-hand as the right.

A. By reason of the great heat of the heart, and for the hot bowing of the same, for that it is which makes a man as nimble of the left hand as the right; who without doubt are of good complexions.

Q. Why are not women ambidexter, as well as men? Hip. ult. Aphorif.

A. Because, as Galen saith, a woman in health, that is most hot, is colder than the coldest an in health; I say in health, for, if she have an
ague,

ague, she is accidentally hotter than a man.

Q. Why are the finger's full of joints.

A. To be more fit and apt to receive, and keep the things received.

Q. Why hath every finger three joints, and the thumb but two?

A. The thumb hath three, but the third is joined unto the arm, and therefore stronger than the other fingers; and is better in strength, seeing it is also in quantity: and is called pollux, a polleo, that is, to excel in strength.

Q. Why are the fingers of the right hand nimble than the fingers of the left? as Ægidius saith.

A. It proceedeth from the heat which doth predominate in those parts, which causeth great agility.

Q. Why are the fingers thicker before meat than after, as Albertus saith?

A. According to the physicians, because a man which is fasting is full of bad humours and divers tumosities, which puff up the parts of the body, and the fingers also: but, when these humours are expelled through meat, the fingers become more slender. And, for the same reason, a man which is fasting is heavier than when he hath meat in his belly, as is most plain in fasters. Another reason may be given, that is, because that after meat the heat is departed from the outward parts of the body into the inward, to help digestion, and therefore the outward and external parts become slender: but, after digestion is made, the blood turneth again to the exterior parts, and then they become great again.

Q. Why are some men left-handed?

A. Because the heart sendeth out heat into the

the right side but more unto the left; and doth also work slenderness and subtile on the left side.

OF THE NAILS.

Q. FROM whence do nails proceed?

A. Of the fumosity and humours, which are resolved, and go into the extremities of the fingers, and they are dried through the power of the external air, and brought to the hardness of a horn.

Q. Why do the nails of old men grow black and pale?

A. Because the heat of the heart decayeth, which decaying, their beauty decayeth also.

Q. Why are men judged to be of good or evil complexion by the colour of their nails?

A. Because they give witness of the goodness or badness of the complexion; for, if they be somewhat red, they betoken choler well tempered: but, if they be inclined to red and somewhat to blackness, they betoken a sanguine complexion; but, if they be yellowish or black, they signify melancholy.

Q. Why do white spots appear in the nails?

A. Through mixture of phlegm with the nutriment.

OF THE BREAST.

Q. FOR what reason is the breast hollow?

A. Because there is the seat of the spiritual and ærial members, which are most noble, as the heart and lights; and, therefore, because these might be kept from hurt, it was necessary the breast should be kept hollow.

Q. Why hath a man the broadest breast of living creatures?

A.

A. Because the spirits of men are weak and subtle, and therefore do require a spacious place, wherein they are contained, as the breast is.

Q. Why are the breasts of beasts round?

A. Because they be in continual motion, and that figure is fittest for motion, as *Arist.* saith, 4 *Phy.*

Q. Why do we draw those things we love to our breast?

A. Because the first and chiefest part of the heart is under the breast; and therefore that, which the heart doth love, we draw to the breast, by reason of the neighbourhood it has with the heart, so applying the thing loved unto the lover.

Q. Why have women narrower breasts than men?

A. Because there is more heat in men, which doth naturally move to the uppermost part of them, making those parts great and large; and therefore a great breast is a token of courage, as *Arist.* saith, declaring this to be true by the lion and bull; but in women cold predominates, which naturally tends downwards; and therefore, saith *Arist.* women oft fall on their tail, because the hinder parts are gross and heavy, by reason of cold, ascending thither; but a man commonly falls on his breast, by reason of his greatness and thickness.

OF THE PAPS AND DUGS.

Q. **W**HY are paps placed upon the breast?

A. Because the breast is the seat of the heart, which is most hot, and therefore the paps grow there, to the end that the menses, being conveyed thither, as being near to the heat of the heart, should the sooner be digested and perfected, and converted into the matter and substance of milk.

Q. Why are the paps below the breasts in beasts, and above the breast in women?

A. Because a woman goes upright, and has two legs

legs only; and, therefore, if her paps should be below her breasts, they would hinder her going; but beasts have four feet, and therefore they are not hindered in their going.

Q. Why have not men as great paps and breasts as women?

A. Because a man hath no monthly terms, and therefore hath no vessel deputed for them. And yet *Aristotle* saith that men have small paps and women have little small stones.

Q. Which paps are best for children to suck, great ones or little ones, or the mean between both?

A. In great ones the heat is dispersed, and there is no good digestion of milk; but in small ones the power or force is strong, because a virtue united is strongest, and, by consequence, there is good working and digestion of the milk, and therefore the small are better than the great ones; but yet the mean ones are best of all, because every mean is best.

Q. Why do the paps of young women begin to grow great about thirteen or fourteen years of age, as *Albertus* saith.

A. Because that then their terms begin to have course and increase; and *Aristotle* saith, mens seed and womens flowers begin to increase at one age.

Q. Why do the paps of such women as cast their child wax soft? as *Hippocrates* saith, Part 2. *Aphor.*

A. Because then the flowers have no course to the teats, by which the young one is nourished, but follow their ordinary course; and therefore they wax soft.

Q. Why hath a woman, which is with child of a boy, the right pap harder than the left?

A. Because the male child is conceived in the right

right side of the mother, as *Hippocrates* saith ; and therefore the flowers do run to the right pap and make it hard.

Q. Why doth it shew weakness of the child when the milk doth drop out of the paps before the woman be delivered ?

A. According to *Aristotle*, because the milk is the proper nutriment of the child in the womb of the mother ; and therefore, if the milk run out, it is a token that the child is not nourished, and therefore is weak.

Q. Why doth the hardness of the paps betoken the health of the child in the womb ?

A. Because the flowers are converted into milk, and that milk doth sufficiently nourish the child, and thereby the strength is signified.

Q. Why hath a woman but two paps, and some beasts ten or more ?

A. Because, for the most part, a woman hath but one child, either boy or girl, and therefore one pap is sufficient, or two ; but beasts have many young ones, and therefore so many teats.

Q. Why are womens paps hard when they be with child, and soft at other times ?

A. They swell then and are puffed up, because the much moisture, which proceeds from the flowers, doth run into the paps, which at other seasons remaineth in the matrix, or womb ; and it is expelled by the place deputed for that end.

Q. By what means doth the milk of the paps come to the matrix or womb ?

A. According to *Hippocrates*, because there is a certain knitting and coupling of the pap with the womb, and there are certain veins which the midwives do cut in the time of the birth of the child, and by those veins the milk doth flow in at the na-

vel of the child, and so it receives nutriment by the navel. Some say the child in the womb is nourished at the mouth; but that is false; because that so he should void excrements also; but that is false, because it is not seen where.

Q. Why is it a sign of a male-child in the womb when the milk that runneth out of the woman's breast is thick and not much, and of a female when it is thin?

A. Because a woman that goeth with a boy hath great heat in her, which doth perfect the milk and make it thicker, but such as go with a girl have not so much heat, and therefore the milk is undigested, and unperfected, watery, and thin, and will swim above the water if it be put into it.

Q. Why is the milk white, seeing the flowers are red, which it is engendered of?

A. Because blood, which is well purged and concocted, becometh white, as appeareth in flesh, whose proper colour is red, and being boiled is white. Another answer is, because every humour which is engendered of such part of the body, is made like unto that part in colour where it is engendered, as near as it can be; but because the paps is white, therefore the colour of the milk is white.

Q. Why doth a cow give milk more abundantly than other beasts?

A. Because she is a great eating beast; and, where is much monthly superfluity engendered, there is much milk, because it is nothing else but that blood purged and tried; and, because a cow has much of this monthly blood, she has much milk.

Q. Why is not milk wholesome, as *Hippocrates* saith, Par. 2. Aphor.

A.

A. According to the opinion of *Galen*, for divers reasons: first, because it doth curdle in the stomach, where an evil breath is bred. But to this *Hippocrates* gives this remedy; saying, if the third part be mingled with running water, then it is not hurtful. Another reason is, because the milk doth grow sour in the stomach, where evil humours are bred, which infect the breath.

Q. Why is milk bad for such as have the head-ache?

A. Because it is easily turned into great fumosities, and hath much terrestrial substance in it, the which ascending doth cause the head-ache.

Q. Why is milk fit nutriment for infants?

A. Because it is natural and usual food, and they were nourished by the same in the womb.

Q. For what reason are the white meats, made of a new-milked cow, good?

A. Because milk at that time is very spungy, expels many fumosities, and does, as it were, purge at that time.

Q. Why is the milk naught for the child, if the woman uses carnal copulation?

A. Because in time of carnal copulation the best part of the milk goes to the seed vessels, and to the womb, and the worst remains in the paps, which doth hurt the child.

Q. Why is the milk of brown women better than that of white?

A. Because brown women are hotter than others, and heat purges the milk, and so it is better.

Q. Why do physicians forbid the eating of fish and milk at the same time?

A. Because they produce a leprosy, and because they are both phlegmatic.

Q. Why have not birds and fishes milk and paps?

A. Because paps would hinder the flight of birds; fishes also have neither paps nor milk, as *Aristotle* saith, but the females cast much spawn, on which the male touches with a small gut, which causes their kind to be infinite in succession.

OF BACKS.

Q. WHY have beasts backs?

A. According to *Aristotle*, for three causes. First, because the back should be the way and mean of body from which are extended and spread throughout all the sinews of the back-bone, as it appears in such as are hanged, because when they are in pieces, or without flesh, the sinews hang whole in the chine or back-bone. The second, because it should be a guard and defence for the soft parts of the body, as of the stomach, liver, lights, and such like. The third, because it should be the foundation of all the bones, because we see other bones, as the ribs, fastened to the back-bone.

Q. Why hath man, above all other creatures, a broad back which he can lie upon; which no beast can do?

A. Because a broad back doth answer a broad breast; if therefore a man should have a sharp back like unto a beast, that would be of an unseemly shape; and therefore it is requisite that we have a broad back.

Q. Why hath a man that lieth on his back horrible visions?

A. Because the passage or sign of the fantasy is open, which is in the fore-part of the brain, and so the fantasy is destroyed, and then those visions follow. Another reason is, because, when a man lieth on his back, the humours are disturbed and moved upward where the fantasy is, which by that means is disturbed.

Q.

Q. Why is it naught to lie on the back ?

A. Because, as the phylician say, it disposes a man to leprosy, madness, and to an *incubus*, where you may note, that *mania*, or madness, is the hurt or disturbance of the fore-part of the brain, with taking away, or deprivation of the imagination : but *incubus*, (*i. e.* the night mare) is a passion of the heart, wherein a man thinks himself to be strangled in his sleep, and something lies heavy on his stomach which he would put off.

Q. Why hath the back bone so many joints, or knots, called Spondelia by the physicians ?

A. For the moving and bending it, without which joints that could not be done : and therefore they say amiss that alledge elephants have no such joints, for without them they could not move.

Q. Why do fishes die after their back-bone is burst ?

A. Because, in fishes the back-bone is instead of the heart. Now the heart is the first thing that lives, and the last that dies, and therefore when the bone is broken, fishes can live no longer.

Q. Why does a man die soon after the marrow is hurt or perished ?

A. Because the marrow proceeds from the brain, which is a principal part of a man ; as appears, first, because the marrow is white, like the brain ; and, secondly, because it hath a thin skin, or rind, which that called *nucha* has not, which differs from the marrow, because *nucha* has two coverings like the brain, called *pia mater* and *dura mater*.

Q. Why have some men the piles ?

A. Those men are cold and melancholy, which melancholy first passes to the spleen, its proper seat, but there cannot be retained for the abundance of blood ; for which reason it is conveyed to the back bone,

bone, where there are certain veins which terminate in the back, and receive the blood. When those veins are full of melancholy blood, then the conduits of nature are opened, and the blood issues out once a month, like womens terms. Those men, who have this course of blood, are kept from many infirmities, as dropfy, plague, &c.

Q. Why are the Jews much subject to this disease?

A. Divines say, because they cried at the death of Christ, *Let his blood fall upon us and our children*; therefore it is said in the psalm, *Percussit Deus posteriora dorsi*. Another reason is, because the Jews eat much phlegmatic and cold meats, which breed melancholy blood, but it is purged with this flux; a third reason is, motion causes heat, and heat digestion; but strict Jews neither move, labour, or converse with men: besides, they are in continual fear we should revenge the death of our Saviour, which likewise breeds a coldness in them, and hinders digestion, causing melancholy blood, which is by these means purged out.

OF THE HEART.

• **W**HY are the heart and lungs called lively parts of the body, in Latin, *Spiritualia membra*?

A. From the word *Spiritus*, which signifies breath, life, or soul; and because the vital spirits are engendered in the heart. Yet that is no good answer; for the liver and brain might be so called, because the vital liver giveth the nutriment, and the brain sense and life: the consequence is clear, for the vital spirits are engendered in the liver, and the sensible and animal spirits in the brain.

Q. Why are the lungs light, spongy, and full of holes?

A. That the air may the better be received in them

them for cooling the heart and expelling humours; because the lungs are the fan of the heart; and, as a pair of bellows is raised up by taking in the air, and shrunk by blowing it out, so likewise the lungs draw the air to cool the heart, and cast it out, lest through too much heat of the air drawn in, the heart should be suffocated.

Q. Why is the flesh of the lungs white?

A. Because they are in continual motion.

Q. Why have those beasts only lungs that have hearts?

A. Because the lungs are no part for themselves, but for the heart: and therefore it were superfluous for those creatures to have lungs that have no hearts; but nature is never wanting in things necessary, nor abounds in superfluities.

Q. Why do such creatures, as have no lungs, want a bladder?

A. Because such drink no water to make their meat digest, but only for the tempering their food, and therefore they want a bladder and urine: as appears in such birds as do not drink at all, viz. the falcon and sparrow hawk.

Q. Why is the heart in the midst of the body?

A. Because it should impart life to all the parts of the body, and therefore it is compared to the sun, which is placed in the midst of the planets, to pour light into them all; therefore the *Pythagoreans*, styling the heavens a great living creature, say, the sun is the heart thereof.

Q. Why only in men is the heart on the left side?

A. To the end the heat of the heart should mitigate the coldness of the spleen; for the spleen is the seat of melancholy, which is on the left side also.

Q. Why is the heart first engendered? for, ac-

According to Aristotle, the heart doth first live, and die last.

A. Because, as Aristotle saith, *de juven. & senect.* the heart is the beginning and original of life, and without it no part can live. According to the philosopher, of the seed, retained in the matrix, there is first engendered a little small skin, which compasses the seed, whereof first the heart is made of the purest blood: then, of blood not so pure, the liver; and, of thick and cold blood, the marrow and brain.

Q. Why are beasts bold that have little hearts?

A. Because in a little heart the heat is well united and vehement, and the blood touching it doth quickly heat it, and is speedily carried to the other parts of the body, which gives courage and boldness.

Q. Why are creatures with a little heart timorous, as the hare?

A. The heart is dispersed in such an one, and not able to heat the blood which cometh to it, and so fear is bred.

Q. How comes it the heart is continually moving?

A. According to Aristotle *de natu. cordis*, Galen, it is because in it there is a certain spirit which is more subtle than air, which, by reason of its thickness and rarefaction, seeks a larger space, filling the hollow room of the heart, whereof the dilating and opening of the heart doth follow: and, because the heart is earthly, the thrusting and moving ceasing, its parts are at rest, tending downwards. Galen giveth an experiment of an acorn, which if put into the fire, the heat dissolves its humidity into smoak, which is thinner than the humidity, therefore doth occupy a greater place, so that the rind cannot contain it, but puffs up and throws it in the fire. The like

like of the heart; therefore note, that the heart of a living creature is triangular in a manner, having its least part toward the left side, and the greatest toward the right, and doth also open and shut in the least part, by which means it is in continual motion; the first motion is, by the physicians, called *Diastole*, that is, extending the breast or heart; the other *Systole*, i. e. shutting of the heart, and, from these two, all the motions of the body proceed, and that of the pulse, which physicians feel.

Q. Why are great beasts lean?

A. The natural heat proceeding from the heart consumes that natural humidity, which should be converted into fat. And, for the most part, women are hotter than men, because they have much humidity in them, and a moister heart than men.

Q. How comes it the flesh of the heart is so compact and knit together?

A. It is because in a thick compacted substance heat is strongly received and united, as appears in other things. And, because the heart with its heat should moderate the coldness of the brain, it is made of that fat flesh, apt to keep a strong heat.

Q. How comes the heart to be the hottest part of all living creatures?

A. It is so compacted as to receive heat best, and because it should mitigate the coldness of the brain.

Q. Why is the heart the beginning of life?

A. It is plain, in it the vital spirit is bred, which is the heat of life; and therefore, according to the opinion of *August. de different. spirit. & animæ*, the heart hath two receptacles, i. e. the right and the left; the right hath more blood than spirits, which spirit is engendered to give life and vivify the body.

Q. Why is the heart long and sharp, like a pyramid?

A. The round figure hath no angles, therefore the heart is round, for fear any poison or hurtful matter should be retained in it; and, as *Aristotle* affirms, because that figure is fittest for motion.

Q. How comes the blood to be chiefly in the heart?

A. The blood is in the heart as in its proper or efficient place, which some attribute to the liver; and therefore the heart doth not receive blood of any other parts, but other parts of it.

Q. How happens it some creatures want a heart?

A. Altho' they have no heart, yet they have somewhat answers it, as appears in eels and fishes, which have the back-bone instead of the heart.

Q. Why does the heart beat in some creatures when the head is off, as appears in birds and hens?

A. Because the heart is what lives first, and dies last, and therefore beats more than other parts.

Q. Why do all creatures which want a heart, want blood likewise, as flies?

A. The heart is the beginning of the blood, and therefore, the cause falling, the effect ceases.

Q. How comes the pulse of the heart more certainly felt in the right side than in the left?

A. The heat of the heart is more lively there than in the other side, consequently more felt there.

Q. Why doth the heat of the heart sometimes fall on a sudden, as in those who have the falling sickness?

A. This proceeds, according to *Constant.* from a defect of the heat itself, and of certain small skins with which it is covered, the which being infected and corrupted, the heart falleth on a sudden; and sometimes it happens by reason of the parts adjoining;

joining ; and therefore, when any venomous humour goes out of the stomach, that hurts the heart, and parts adjoining, that causes this fainting. The disposition of the heart is known by the pulse, because a swift-beating pulse shews the heat of the heart, and a slow beating one denotes coldness. Therefore a woman, that is in health, has a slower and weaker pulse than a man, as shall appear hereafter.

OF THE S T O M A C H.

Q. FOR what reason is the stomach large and wide ?

A. Because in it the food is first concocted or digested, as it were in a pot, to the end that what is pure should be separated from that which is not, as *Aristotle* saith ; and therefore, according to the quantity of the food, the stomach is enlarged.

Q. How comes it that the stomach is round ?

A. Because, if it had angles and corners, as *Confl.* says, food would remain in them and breed ill humours ; so a man would never want agues : the which humours, nevertheless, are evacuated, lifted up, and consumed, and not hid in any such corners, by reason of the roundness of the stomach.

Q. How comes the stomach full of sinews ?

A. As *Aristotle* saith, because the sinews can be extended and enlarged, and so is the stomach when it is full ; but, when empty, it is drawn together ; and therefore nature provides those sinews.

Q. How comes the stomach to digest ?

A. Because of the heat which is in it, and comes from the parts adjoining, *i. e.* the liver and heart. For we see, in metals, the heat of the fire takes away the rust and dross from iron, the silver from tin, and gold from copper ; so that by digestion the

pure is separated from the impure. Digestion is of four sorts, according to physicians.

Q. for what reason doth the stomach join the liver?

A. Because the liver is very hot, and with its heat helps digestion and provokes appetite.

Q. Why are we commonly cold after dinner?

A. Because then the heat goes to the stomach to further digestion, and so other parts become cold.

Q. Why is it hurtful to study after dinner?

A. Because when the heat labours to help the imagination in study, it ceases from digesting the food, and that remains undigested; so that people should walk some time after meals.

Q. How come women with child to have an inordinate desire of eating coals, ashes, and such like?

A. Because such are the humours of the stomach, such a nutriment they desire; and because women with child have corrupt humours, therefore they desire the like things.

Q. How comes the stomach slowly to digest fat meat?

A. Because it swims in the stomach. Now the best digestion is in the bottom of the stomach, and the fat descends not there: such as eat fat meat are very sleepy, by reason digestion is hindered.

Q. Why is all the body worse when the stomach is uneasy?

A. Because the stomach is knit with the brain, heart, and liver, which are the principal parts in man; and therefore, when it is not well, the other are evilly disposed. Another answer is, that if the first digestion be hindered, the others are also hindered, for in the first digestion is the beginning of the infirmity that is in the stomach.

Q.

Q. Why are young men sooner hungry than old men?

A. Young men do digest for three causes: first, for growing, then for the restoring of life, and lastly, for the conservation of life, as *Hippocrates* and *Galen* do say: else we answer, are hot and dry, and therefore the heat doth digest more; and, by consequence, they desire more.

Q. Why do physicians prescribe that men should eat when they have an appetite?

A. Because much hunger and emptiness will fill the stomach with naughty rotten humours, which man draws unto himself instead of meat; which do easily appear, because that, if we fast over night, we have an appetite to meat, but in the morning none. That is therefore a token that the stomach is filled with naughty humours, and especially its mouth: which is no true filling, but a deceitful one. And therefore, after we have eaten little, our stomach comes to us again; and then the proverb is, One morsel draweth down another: for the first morsel having made clean the mouth of the stomach, doth provoke the appetite.

Q. Why do physicians prescribe that we should not eat too much at a time, but by little and little?

A. Because, when the stomach is full, the meat doth swim in it, which is a dangerous thing. Another reason is, that, as very green wood doth put out the fire, so much meat choaks the natural heat, and puts it out. And therefore the best physic is, to use moderation in eating and drinking.

Q. Why do we desire change of meats according to the change of times; as, in winter, beef, pork, mutton; in summer, light meats, as veal, lamb, &c.

A. Be-

A. Because the complexion of the body is altered, and changes according to the time of the year. Another answer is, that this proceeds from the quality of the season, because the cold winter doth cause a better digestion, because the stomach and belly are hotter in winter, by reason of the encompassing cold, as *Hippocrates* and *Aristotle* do teach.

Q. Why should not the meat we eat be too hot, as pepper and ginger?

A. Because hot meat burns the blood, and disposes it to a leprosy. So, contrariwise, meat too cold mortifies and congeals the blood. And our meat should not be over sharp, because it procures old age; and too much sauce burns the entrails, and procures often drinking, as raw meat doth; and over sweet meats do constipate and cling the veins together.

Q. Why is it a good custom to eat cheese after dinner, and pears after all meat?

A. Because cheese, by reason of its earthliness and thickness, tendeth down toward the bottom of the stomach, and so putteth down the meat; and the like of pears. Note, that new cheese is better than old, and the old dry soft cheese is very naughty, and procureth the head-ache and stopping of the liver; and the older the worse. Whereupon it is said, that cheese is naught, and digesteth all things but itself.

Q. Why be nuts good after fish? as the verse is:

After fish, nuts; after flesh cheese.

A. Because fish is of a hard digestion, and doth easily putrify and corrupt; and nuts help digestion, because they are somewhat hot; fish are poisoned sometimes, and nuts are a remedy against a poison: and note, that fish should be of a clear stony water, and not of a cold standing muddy water; and should be

be drest with wine and parsley, for so it hurterh least,

Q. Why is it unwholesome to stay long for one dish after another, and to eat of divers kinds of meat?

A. Because the first begins to digest when the last is eaten, and so the digestion is not equally made, and therefore the meat digested becometh to corrupt. But yet this rule is to be noted touching the order of meat, that if there be any dishes, whereof some are light of digestion, as chicken, kid, veal, soft eggs, and such like, these meats should be first eaten; but gross meats, as venison, bacon, beef, roasted pork, hard eggs, and fried eggs, should be eaten last. And the reason is, because that, if they should be first served and eaten and were digested, they would hinder the digestion of the others; and the light meats not digested would be corrupted in the stomach, and kept in the stomach violently, whereof there would follow belching, loathing, head-ache, belly-ache, and great thirst: and, by consequence, it is very hurtful, at the same meal, to eat milk, and drink wine, because they dispose a man to a leprosy.

Q. Which is best for the stomach, meat or drink?

A. Drink is sooner digested than meat, because meat is of greater substance and more material than drink, and therefore meat is harder to digest.

Q. Why is it good to drink after dinner?

A. Because the drink should make the meat readier to digest. For, if a pot be filled with fish or flesh without liquor, then both the pot and the meat are marred. The stomach is like unto a pot which doth boil meat, and therefore, physicians do council to drink at meals.

Q. Why is it good to forbear a late supper?

A.

A. Because there is no moving or stirring after supper, and so the meat is not sent down to the bottom of the stomach, but remaineth undigested, and so breeds hurt: and therefore, a light and short supper is best, as the old verse doth shew.

Q. Why is it naught to drink wine fasting?

A. Because it doth greatly injure the brain, and breed the falling sickness and apoplexy.

Q. Why is it hurtful to drink much cold water?

A. Because one contrary doth hinder and expel another; for water is very cold, and lying so in the stomach, hinders digestion.

Q. Why is it unwholesome to drink new wine, and why doth it very much hurt the stomach?

A. One reason is, it cannot be digested, therefore it causes the belly to swell, and in some sort the bloody-flux; secondly, it hinders making water; but to drink good wine is wholesome.

Q. Why do physicians forbid us to labour presently after dinner?

A. For three reasons: first, because motion hinders the virtue and power of digestion: secondly, because stirring immediately after dinner causes the parts of the body to draw the meat raw to them, which often breeds sickness; and thirdly, because motion makes the food descend before it is digested: but after supper it is good to stir, by reason we soon after go to sleep, and therefore should walk a little, that the food may go to the bottom of the stomach.

Q. Why is it good to walk before dinner?

A. It makes a man well disposed, fortifies and strengthens the natural heat, causing the superfluity in the stomach to descend; wherefore *Avicen.* says, such as neglect this exercise fall into inflammation of the heart.

Q. Why is it wholesome to vomit, as some say?

A. Because it purges the stomach of all naughty humours, expelling them, which would breed agues if they should remain in it. *Avicen.* says, a vomit purges the eyes and head, clearing the brain.

Q. How comes sleep to strengthen the stomach and the digestive faculty?

A. Because in sleep the heat draws inwards, and helps digestion; but when we awake, the heat remains and is dispersed throughout the body.

Q. How come some men to evacuate clear sweat;

A. By reason of the weakness of nature and expulsion.

OF THE BLOOD.

Q. WHY is it necessary every living thing, that has blood, have also a liver?

A. According to *Arist.* because the blood is first made in the liver, its seat, and is drawn from the stomach by certain principal veins, and so engendered.

Q. For what reason is the blood red?

A. First it is like the part in which it is made, *i. e.* the liver, which is red, then it is likewise sweet, because it is well digested and concocted; but if it have a little earthy matter mixed with it, that makes it somewhat salt, as appears in *Aristotle, Lib. Meteor.*

Q. How comes womens blood thicker than mens?

A. Their coldness thickens, binds, congeals, and joins it together.

Q. How comes the blood to all parts of the body through the liver, and by what means?

A. Thro' the principal veins, as the veins of the head, liver, &c. to nourish all the body.

OF THE URINE.

Q. **H**OW doth the urine come into the bladder, seeing the bladder is shut?

A. Some say by sweating, and it seems to be true. Others say it comes by a small skin in the bladder, which opens and lets in the urine: *Theophrastus* says, urine is a certain, and not a deceitful messenger of the health or infirmity of man. *Hippocrates* says, that men make white urine in the morning, and before dinner red; but after dinner pale, and likewise after supper; for there are divers colours.

Q. How doth the loofy proceed from the liver?

A. Because, says *Conit.* the digestive power in the liver cannot convert the thick substance in the four humours, but it is converted into water only, which swells and puffs up a man's belly especially.

OF THE GALL AND SPLEEN.

Q. **H**OW came living creatures to have a gall?

A. Because cholerick humours are received into it, which, thro' their acidity, help the guts to expel superfluities: also it helps digestion.

Q. How comes the jaundice to proceed from the gall?

A. The humour of the gall is blueish and yellow; therefore, when its pores are stopped, the humours cannot go into the sack thereof, but is mingled with the blood, wandering throughout all the body, and infecting the skin.

Q. Why hath not a horse, mule, ass, or cow, a gall?

A. Though those creatures have no gall in one place, as in a purse or vessel, yet they have one dispersed in small veins.

Q. How comes the spleen black?

A. It is occasioned by a terrestrial and earthy matter of a black colour, as *Aristotle* says. Another reason.

reason is, according to physicians, the spleen is the receptacle of melancholy, and that that is black.

Q. Why is he lean who hath a large spleen?

A. Because the spleen draws much water to itself, which would turn to fat: therefore, contrariwise, men that have but a small spleen are fat.

Q. Why does the spleen cause men to laugh? as says Isidorus; we laugh with the spleen, we are angry with the gall, we are wise with the heart, we love with the liver, we feel with the brain, and speak with the lungs; that is, the cause of laughing, anger, love, wisdom, speech, and feeling, proceeds from the spleen, gall, liver, lungs, and brain,

A. The reason is, the spleen draws much melancholy to it, being its proper seat; the which melancholy proceeds from sadness, and is there consumed, and the cause failing, the effect doth so. And by the same reason the gall causes anger; cholerick men are often angry, because they have much gall. For the better understanding of this, note, that there are four humours in man, viz. blood, choler, phlegm, and melancholy; each has its particular receptacle. Of a hot and dry substance choler is engendered, and goes to the gall: but of a cold and dry humour melancholy is engendered, and goes to the spleen; of a cold and moist humour phlegm is engendered, and goes to the lungs for its reception, or (as physicians say) to the spleen: but the blood, which is the most noble humour, is engendered in the liver, which is its proper place.

OF CARNAL COPULATION.

Q. **W**HY do living creatures use carnal copulation?

A. Because it is the most natural work that is in them to beget their like; for, if copulation were not, all procreation had ere now sunk.

Q. What is this carnal copulation?

A.

A. It is a mutual action of male and female, with the instrument ordained for that purpose, to propagate their kind; and therefore divines say it is a sin to use that act for any other end.

Q. Why is this action good in those who use it lawfully and moderately?

A. Because, say Avicen. and Const: it eases and lightens the body, clears the mind, comforts the head and senses, and expels melancholy. Therefore sometimes, thro' the omission of this act, dimness of sight doth ensue, and giddiness; besides, the seed of a man, retained above its due time, is converted into some infectious humour.

Q. Why is immoderate carnal copulation hurtful?

A. Because it destroys the sight, dries the body, and impairs the brain; often causes fevers, as Avicen. and experience shew: it shortens life too, as is evident in the sparrow, which, by reason of its often coupling, lives but three years.

Q. Why doth carnal copulation injure melancholy or choleric men, especially thin men?

A. Because it dries the bones much, which are naturally so. On the contrary, it is good for the phlegmatic and sanguine, as Avicen. says, because they abound with that substance which by nature is necessarily expelled. Though Aristotle affirms, that every fat creature has but little seed, because the substance turns to fat.

Q. Why do not female brute beasts covet carnal copulation after they be great with young?

A. Because then the womb or matrix is shut, and desire doth cease.

Q. Why should not the act be used when the body is full?

A.

A. Because it hinders digestion; and it is not good for a hungry belly, because it weakens.

Q. Why is it not good after a bath?

A. Because then the pores are open, and the heat disperses thro' the body; yet after bathing it cools the body very much.

Q. Why is it not proper after vomiting or looseness?

A. Because it is dangerous to purge twice in one day; but so it is, in this act, the reins are purged, and the guts by the vomit.

Q. Why are wild beasts furious when they couple, as appears in asses, which bray; and harts, who are mad almost, as Hippocrates says?

A. Their blood is kindled with desire, and nature also labours to expel superfluities in them, which dispose to anger and madness: therefore the act done, they are tame and gentle.

Q. Why is there such delight in the act of venery?

A. Because this act is a base and contemptible thing in itself, insomuch that all creatures would naturally abhor it, were there no pleasure in it, and therefore nature readily uses it, that all kind of living things should be maintained and kept.

Q. Why do such, as use it often, take less delight in it than those that come to it seldom?

A. For three reasons: first, because the passages of the seed are over large and wide, therefore it makes no stay there, which would cause the delight. Secondly, because that, thro' often evacuation, there is little seed left, therefore no delight. Thirdly, because such, instead of seed, cast out blood undigested and raw, or some other watry substance, which is not hot, and therefore affords no delight.

Q. Can this carnal copulation be done by the mouth, so that beasts may conceive thereby, as some say of pigeons, that by kissing do it, and conceive? Some say this is true in the weasel or ermine.

A. According to Aristotle it is false; for, tho' pigeons do kiss by the beak, yet they do not couple together this way, nor conceive. And, because the weasel carries his young ones from place to place in his mouth, they are of that opinion; wherefore Aristotle says, whatever goes in at the mouth is consumed by digestion; and, if the seed should go in at the mouth, then that would be consumed by digestion. The major part is plain, the conclusion doth hold in *Darii*.

Of the SEED of MAN or BEASTS.

Q. **H**OW, and of what, cometh the seed of man? A. There are divers opinions of philosophers and physicians in this point. Some say it is a superfluous humour of the fourth digestion; others say, that the seed is pure blood flowing from the brain, concocted and whitened in the testicles; and some say it is the superfluity of the second or third digestion; but because of sweat, urine, spittle, phlegm, and choler, and the like, Aristotle says, the seed is always the superfluity of the last nutriment, that is, of blood dispersed throughout the body, which comes chiefly from the heart, liver and brain; an argument of this is, because those parts are greatly weakened by casting seed; and therefore it appears that carnal copulation is not profitable or good. But some think this to be true only by over vehement practice in this act: but moderately used, it is very wholesome, as it is said before.

Q. Why is a man's seed white, and a woman's red?

A. It is white in man by reason of his great heat and

and quick digestion, because rarified in the testicles; but a woman's is red, because it is the superfluity of the second digestion, which is done in the liver. Or else we may say, it is because the terms corrupt undigested blood, and hath its colour.

Q. Doth the seed of a man come from the parts of the body, or from the humours?

A. Some say from the parts of the body; and that we prove, because we find a lame man begets a lame child; and if the father hath a scar, the child hath one also, as Aristotle alledges, *Lib de Animal*, which could not be, if the seed did not fall from the parts of the body. Some say it comes from the humours, by reason it is made of the least nutriment, and that is no part, but a humour: as for lameness or scars, that proceeds from the imagination of the mother, at the time of carnal copulation, as Aristotle saith, *Lib de Generat. Animal*.

Q. How comes the imagination of the mother to bring forth a black-moor, as Albertus Magnus reports of a queen, who, in the act of carnal copulation, imagined a black, being painted, and being in her sight?

A. Avicen. says, the imagination of a fall makes a man fall, and the imagination of a leprosy makes a man a leper. So in this, the imagination is above the forming power, and therefore the child born followeth the imagination, and not the power of forming and shaping, because it is weakest.

Q. Doth the man's seed enter into the substance of the child?

A. The seed of both father and mother go into the substance of the child in the womb, as cream goeth to the substance of the cheese. Yet this opinion doth not seem to be of force; therefore, according to our author and other philosophers, we say, the seed

seed doth not go into the substance of the child ; and it is proved thus : because that so the matter and the efficient cause should be all one, which is against the philosopher. The consequence is good, because the seed is the efficient cause of the house, and therefore is not the efficient cause of the child. This is proved another way ; as there is the self-same material cause of nourishment and generation, 2. de Anim. so we have our being and nourishment of the same matter ; but the seed cannot be the material cause of nourishment, according to Averroës, therefore not of the being : and, as both seeds are shut up in the womb, so that of the man disposeth and prepares the woman's to receive the form, perfection, or soul ; which being done, it is converted into a humidity that is breathed out by the pores of the matrix.

Q. Why doth the matrix of a woman draw greedily the seed of a man ? For, as Averroës saith, there was a maid in a bath, where some seed had been cast, which the maid drawing, she conceived with child.

A. Averroës says, the womb and nature draw the seed as the load-stone doth iron, but she draws it for the perfection of herself.

Q. How come females to have monthly courses ?

A. Because they are cold in respect of men, and because all their nourishment cannot be converted into blood, a great part whereof turns to mentes, which are monthly expelled : I mean every woman in health, and of 13 years, seldom any before ; nay some distempered women have them not at all.

Q. For what reason do they not come before 13 ?

A. Because young women are hot, and digest all their nourishment, therefore have them not before that age.

Q. For what reason do they leave at about fifty?

A. Some answer that old women be barren, and therefore they cease; but a better answer is, that then nature is weak in them, and therefore they cannot expel them by reason of weakness; there is great store of immundities bred in them, which lie in a lump; this makes them troubled with coughs and other infirmities. Men should refrain their use at those times.

Q. Why have not breeding women the menses?

A. Because, as Aristotle and Albertus say, in quadrupeds they turn into hair, in fish to scales, in birds to feathers; wherefore you may observe in beasts the female is more hairy than the male; female fish fuller of scales, and female birds fuller of feathers.

Q. Why are they termed *menstrua*, from the word *mensis*, a month?

A. Because it is a space of time which measures the moon, as she ends her course in 29 days and 14 hours. Now, the moon hath dominion over moist things, and by reason the menses are humid, they are called *mensium profluvium*; for moist things encrease and decrease as the moon does.

Q. Why do they continue longer with some than others, as with some 6 or 7, but commonly with all 8 days?

A. The first are colder, therefore they encrease most in them, and consequently are longer in expelling; other women are more hot, and therefore they have fewer, and are sooner expelled.

Q. Where are the terms retained before they run?

A. Some say in the matrix or womb; but, Averroes says, the matrix is the place for generation, and those terms further generation not at all. Therefore, he asserts, that there are certain veins about the back-

back-bone which retain them; a sign of which is, those women (at that time) have great pain in their backs.

Q. Are the menses which are expelled, and those which the child is engendered of, all one?

A. No; because the first are unclean, and unfit for that purpose, but the other very pure and clean, therefore fittest for generation.

Q. Why do those, got with child when they have the terms upon them, bring forth weak and leperous children?

A. Because they are venomous; so the cause appears in the effect, as philosophers say; the effect carrieth the likeness, or the cause; therefore such a child must needs be ill-disposed of body.

Q. Why have not women these at one and the same time, but some in the new-moon, some in the full, and others at the wane?

A. By reason of their several complexions; and, though all women (in respect of men) are phlegmatic, yet some are more sanguine than others, some more choleric: as months have their quarters, so have women their complexions, the first sanguine, the second choleric. One of a sanguine complexion hath her terms in the first quarter, a choleric in the second, a melancholy in the third, and so in the rest.

Q. Why have the sanguine theirs in the first quarter?

A. Because, saith Galen, every such thing added to such a thing doth make it more such; therefore the first quarter of the moon encreaseth blood in a sanguine complexion, and then she expels it.

Q. How do they come in the end of the month?

A. Because most women then are phlegmatic, and the last quarter is phlegm. Or else it proceeds from

from defect, and therefore cold works then to multiply the matter, and, so multiplied, is then expelled.

Q. How happen pain and grief at that time?

A. Because it is like the pain of the stranguary, in making water drop by drop: for the stranguary, by reason of the drink undigested, offends the subtle passage of the urine, as happens after bathing; so the menses undigested, and of an earthy substance, hurt the passage by which they go.

Q. Why do women easily conceive after their menses?

A. Because the womb being cleansed, they are better prepared for conception.

Q. Why do women look pale when they are upon them?

A. Because then the heart goes from the outward part of the body to the inward, to help nature and expel their terms, which deprivation of heat doth cause a paleness in the face. Or else it is because that flux is caused of raw humours, which, when they run, make the face colourless.

Q. Why do they at that time abhor their meat?

A. Because nature labours more to expel their terms than to digest, and therefore if they should eat, it would remain raw in the stomach.

Q. Why are some women barren and cannot conceive?

A. According to physicians, for divers reasons; first, because it proceeds sometimes of the man, who may be of a cold nature, and so his seed unfit for generation; secondly, because it is watery, and so doth not stay in the womb; thirdly, by reason the seed of them both has not a like proportion; as, if the man be melancholy and the woman sanguine, or the man choleric and the woman phlegmatic; for, it is evident in philosophy, that the agent

agent and the patient ought to have the same proportion, else the action is hindered.

Q. Why do fat women seldom conceive with child?

A. Because they have a slippery womb, and the seed will not stay in; or else because the mouth of the matrix is very strait, and the seed cannot enter in; or, if it do, it is very slowly, that it grows cold in the mean time, and so is unfit for generation.

Q. Why do those of very hot constitutions seldom conceive with child?

A. Because the seed in them is extinguished or put out, as water cast into fire; whereof we find women, that vehemently desire the flesh, seldom conceive with child.

Q. Why are whores never with child?

A. By reason of divers seeds, which corrupt and spoil the instruments of conception, for it makes them so slippery that they cannot retain seed. Or else it is because one man's seed destroys another, so neither is good for generation. *Albertus* says, the best thing, to help conception, is, to take the matrix of a hare, beat to powder, and so put in drink.

Q. Why doth a woman conceive a male child?

A. If the seed fall on the right side of the matrix a male child is begotten, for that side is hotter than the other, and heat chiefly works to the begetting a male child. *Albertus* says, if the right side of a woman swell, it is a sign she goes with a male. But some alledge another reason, viz. when the seed of the father exceeds that of the mother then a male child is begotten; if the contrary, then a female.

Q. Why doth a woman conceive a female child?

A. Because the seed is fallen into the left side of the matrix, and that is colder than the right, by reason of the spleen joining to it, which helps cold, as *Albertus* saith; when the woman, after the act of copulation

copulation, doth lie on the right side, it is a boy; when on the left side, a girl; for the seeds run to the side on which the woman lieth.

Q. Why have some women long and slender children, and others short and thick?

A. Because, as *Galen* and *Averroes* say, the child is formed according to the dimension of the womb: wherefore, because some women have a long and narrow womb, their children are long and slender, others, on the contrary, short and large, therefore their children are short and thick.

Q. Why doth a woman sometimes conceive twins?

A. According to *Galen*, because there are several cells or receptacles in the womb; wherefore we may naturally have so many children at once as there fall seeds in those cells: there are three in the right side, and three in the left; in the right side, boys are engendered: in the left, girls; and, in the midst of these cells or chambers, there is another, where the ancients assert hermaphrodites are engendered: if a woman should have more than seven children at once, it would be rather miraculous than natural.

Q. Why are twins but half men, and not so strong as other men?

A. By reason the seed, which should have been for one, is divided into two, and therefore they are weakly, and in truth do not often live long.

OF HERMAPHRODITES.

Q. HOW are hermaphrodites begotten?

A. There are three cells in the womb, one on the right side, another on the left, and a third in the center, into which when the seed falls, an hermaphrodite is said to be begotten; in this manner; because nature doth always tend to that which is best, therefore she doth always intend to beget the male, and not the female, because the female is on-

ly. for the male's sake: therefore the male is some time begotten in all principal parts; and yet, thro' the evil disposition of the womb and object, and inequality of the seeds, when nature cannot perfect and end the male, she brings forth the female too. And therefore, the natural philosopher says, an hermaphrodite is impotent in the privy parts of man, as appears by experience.

Q. Why doth not nature dispose in him two secret parts of man, or two of a woman; but one of a man, and one of a woman?

A. Because nature would then make one of them in vain: but that is against the philosophers, who say that God and nature make nothing in vain.

Q. Is an hermaphrodite accounted a man or woman?

A. It is to be considered in which member it is fittest for the act of copulation; if it be fittest in the woman's, then it is a woman: if in the man's, it is a man.

Q. Should it be baptized in the name of a man or a woman?

A. In the name of a man, because names are given *ad placitum*, and therefore it should be baptized according to the worthiest name, because every agent is worthiest than its patient.

Q. Shall it stand in judgement in the name of a man or woman?

A. According to the law it should first swear, before it be admitted to judgement, which secret part it can use, and so is to be admitted according to the use and power of that part.

OF MONSTERS.

Q. **D**OTH nature make any monsters?

A. She doth; for, if she did not, she would then be deprived of her end. For of thing possible she doth always purpose to bring forth that which

which is most perfect and best; but in the end, through the evil disposition of the matter, and influence of some special constellation, not being able to bring forth that which she intended, she brings forth that which she can, as it happened in *Albertus's* time, when, in a certain village, a cow brought forth a cow half a man; then the countrymen, suspecting a shepherd, would have burnt him with the cow, but *Albertus*, being skilful in astronomy, said, that this did proceed from a special constellation, and so delivered the shepherd from their hands.

Q. Are they one or two?

A. *Aristotle* saith, you must look into the heart, and, if there be two hearts, there be two men.

Q. Why is a man born sometimes with a great head, and six fingers on one hand, or with four?

A. *Aristotle* saith, it proceeds of superfluity and bundance of matter; when there is too much matter, then he is born with a great head, or six fingers; but if there be want of matter, then there is some part too little, or less than it ought to be.

OF I N F A N T S.

W H Y are some children altogether like the father, some like the mother, some to both; and some to neither?

A. If the seed of the father do wholly overcome that of the mother, the child doth wholly resemble the father; but, if the mother's predominate, then it is like the mother; but, if he be like either, that doth happen for many causes; sometimes through the four qualities, sometimes thro' the influence of some heavenly constellation. *Albertus* gives an example, and saith, that there was once a good constellation for begetting of hogs, and a child

a child was then begotten and brought forth which had a face like a hog, and, according to this, divers sorts of monsters are brought forth.

Q. Why are children oftner like the father than the mother?

A. That proceeds of imagination of the mother in the act of copulation; and, therefore, by reason of the strong imagination in the time of conception the children get the disposition of the father; as it appears before of the queen which had her imagination on a black moor; and of an Ethiopian queen, which brought forth a white child; because her imagination was upon a white colour. And this is seen in *Jacob's* skill in casting rods of divers colours into the water when his sheep went to ram.

Q. Why do children sometimes resemble more the grandfathers and great grandfathers, than their parents?

A. Because the virtue and force of the grandfather is grafted in the heart of the begetter; and it may be said that sometimes it doth proceed of the similitude of the nutriture, and then the child is formed by the similitude of the grandfathers.

Q. Why are the parts of a child's body of divers qualities?

A. This proceeds of the predomination of divers elements; because the bones are made of a terrestrial matter they are hard; but the brain and rest of the marrow are made of a more watery matter, therefore more soft; the vital and animal spirits are of an aerial substance, and are principally in the liver and heart.

Q. Why do children, according to the common course and use of nature, come out of the mother's womb in the ninth month?

A. Because the child is then fully perfect; or else because some be-
sign planet doth reign, as Jupiter,

Jupiter, who is a friend of nature; for, according to astronomers, he is hot and moist, and therefore doth temper the malice and naughtiness of Saturn, which is cold and dry, and therefore, for the most part, children born in the ninth month are healthful.

Q. Why do children born in the eighth month, for the most part, die quickly? and why are they called the children of the moon?

A. Because the moon is a cold planet which has dominion over the child, and therefore doth bind it with its coldness, which is the cause of its death.

Q. Why doth a child cry as soon as it is born?

A. Because of the sudden change from heat to cold, which cold doth hurt its tenderness. Another reason is, because the child's soft and tender body is wrung and put together, coming out of the narrow and strait passage of the matrix; and especially the brain's being moist, and the head prest and wrung together, is the cause that some humours do distil by the eyes, which are the cause of tears and weeping. The divines say, it is for the transgression of our first fathers, and original sin.

Q. Why doth a child put his finger into his mouth when he cometh first into the world?

A. Because that, coming out of the womb, he cometh out of a hot bath, and, entering into the cold, he puts his fingers into his mouth for want of heat.

Q. How doth a child come into the world out of the womb?

A. He cometh forth with the head forward: for, if he should come with the thighs or arms forward, he would kill himself and the mother.

OF THE YOUNG ONE IN THE WOMB.

Q. HOW is the young one ingendered in the womb?

A. The first six days the seed hath the colour of milk, but in the six days following a red colour.

colour, which is near unto the disposition of flesh; and then it is changed into a thick substance of blood; but, in twelve days following, this substance is made so thick and sound, that it is able to receive shape and form, because a fluid or running substance keepeth on until his birth. And how he is governed every month, by the planets, Boetius tells us elsewhere.

Q. Doth the child in the womb void excrement or make water?

A. No; and the reason is, because he hath the first digestion which is in the stomach; he receives no food by the mouth, but it comes to him at the navel; he therefore makes no urine, but sweats, which at best is but little, and is reserved in a skin in the matrix, and at his birth is cast out.

Q. Why doth the child come out of the matrix easily after seven, eight, or nine, months?

A. Because, saith Galen, when the fruit is ripe, then the ligaments are broken, and so it falls out.

OF ABORTION AND UNTIMELY BIRTH.

Q. **W**HY do women that eat unwholesome meats easily miscarry?

A. Because it breeds putrified seed in them, which the mind abhorring, it is cast out of the womb, as unfit for the most noble shape, which is adapted to receive the soul.

Q. Why doth wrestling or leaping cause the casting of the child, as some subtle women used to do on purpose?

A. The vapour is burning and doth easily hurt the tender substance of the child, entering in at the pores of the matrix. Albertus says, if the child be near delivery, lightening and thunder will kill it.

Q. Why do thunder and lightening rather cause young women to miscarry than old?

A. Because the bodies of young women are fuller of

of pores, and more slender, and therefore the lightening sooner enters into their bodies : but old ones have a thick skin, well compacted, therefore the vapour cannot enter.

Q. Why does much joy cause a woman to miscarry ?

A. Because in the time of joy a woman is destitute of heat, and so miscarriage do follow. The same reason doth cause fear to breed it, for then the heat runs to the heart, and forsakes the matrix.

Q. Why do women easily miscarry when they are first with child, viz. the first, second, or third month ?

A. As apples and pears easily fall at first, because the knots and ligaments are weak, so it is of a child in the womb.

Q. Why is it hard to miscarry when they are come to the midst of their times, as 3, 4, 5, or 6 months ?

A. Because then the ligaments are stronger, and well fortified, and not easily broken.

OF DIVERS MATTERS.

Q. **W**HY have some women greater grief than others in child-birth ?

A. For three reasons ; first, for the largeness of the child ; secondly, the midwife being unskillful ; and thirdly, because the child is dead, and cannot be bowed. For the contrary causes some have less pain.

Q. Why have not a man a tail like beasts ?

A. Because man is a noble creature, whose property is to sit ; so a beast cannot that hath a tail.

Q. Why do such as keep hot houses expel the heat of the furnace better with cold water than hot ?

A. By reason they are contrary qualities, which work strongly one against the other, therefore the heat is more easily expelled from the stone,

Q. Why does hot water freeze sooner than cold ?

A. Because hot water is thinner, and gives better entrance to the frost.

Q. Why is every living thing dull after copulation ?

A. By reason the act is filthy and unclean ; and so every living creature abhors it ; when men do think upon it they are ashamed and sad.

Q. Why cannot drunken men judge of taste as well as sober ones ?

A. Because the tongue, being full of pores, and spongy, receives great moisture in it, and more in drunken men than sober ; therefore the tongue (thro' often drinking) is full of bad humours, and because it is so, the faculty of taste is rendered out of order ; therefore, thro' the thickening of the mean, *i. e.* taste itself, drink taken of drunkards is not presently felt, for to due feeling there is requisite to have a due proportion of the mean. And by this also is understood why drunkards have not a perfect speech then.

Q. Why have melancholy beasts long ears ? and why are not those men wise for the most part that have long ears, but those with short ones ?

A. The ears proceed from a cold and dry substance, called a gristle, which is apt to become a bone ; and, because melancholy beasts do abound with this kind of substance, they have long ears.

Q. How comes the others to be half-witted ?

A. Because the minds and souls follow the bodies ; for, if the senses of the body be subtle, the soul exercises subtle operations, as well active as speculative ; and the contrary is in a gross body.

Q. How is the intellectual soul joined to a child in the womb of the mother ; and how does the man
who

who begets it, make the matter apt and fit to receive the soul?

A. Divines say, that into a substance sufficiently disposed and made fit, God doth infuse the intellectual soul; and St. Augustine says the like. The soul in creation is infused, and, in infusing, is created.

Q. Why do hares sleep with their eyes open?

A. Because they have their eyes standing out, and their eye-lids short, therefore never quite shut. Another reason is, they are timorous, and, as a safeguard to themselves, sleep with their eyes open.

Q. Why do not crows feed their young till they be nine days old?

A. Because seeing them of another colour, they think they are of another kind; mean while God feeds them with heavenly dew: as the psalmist saith, "He who doth give beasts their food, and young crows, which call upon him."

Q. Why are sheep and pigeons mild creatures?

A. Because they want galls, which stir anger.

Q. Why have birds their stones inward?

A. Because, if they were outward, they would hinder their flying and lightness.

Q. How comes it birds do not piss?

A. Because that superfluity, which should be converted into urine, is turned into feathers; for there is much moisture in the feathers. Another reason is, they are in continual motion; therefore moisture in them is dried up by air or wind.

Q. How come long eggs to be a sign and cause of the male, and flat short eggs of the female?

A. Hippocrates says, it is the property of heat to ascend from the center to the circumference of cold. Therefore, if there be any long eggs, it is a sign they have great heat, and therefore pass into the

substance of the male, for in every kind the male is hotter than the female, as philosophers say. If the eggs be short and flat, it is a sign the heat is small and undispersed, and goeth into the substance of the female.

Q How do we hear better by night than by day?

A. Because, as Aristotle saith, there is greater quietness in the night than in the day, for the sun doth not exhale the vapours by night, but it doth in the day, therefore the means is more fit and ready; and the mean being fit, the motion is better done by it, which is said to be done by a sound. Another reason is, there are motions of the air, and sounds, in the day, more than in the night, which hinder one another; in the night there is silence, which is opposite to sound, and opposites, put one against the other, shew the better.

Q. For what reason doth a man laugh sooner when touched in the arm-pits than in other parts of the body?

A. Because there is in that place a meeting of many sinews, and the mean we touch (which is the flesh) is more subtle there than in other parts, and therefore a better feeling. And this is true if that place be not touched too roughly; if you do so, then there is not that delight; when a man is moderately and gently touched there, the spirits, that are there dispersed, run into the face, and thence is caused laughter.

Q. How comes wood when burnt to be converted into a black coal, and a bone burnt to be converted into a white substance?

A. Because the wood before it was burnt was moist, and so after burning, getteth heat accidentally, and that heat is not able to consume all the moisture of the wood, and therefore there remaineth some after the

the burning, and it is converted into a black substance, because the humidity of the wood was slimy, and could not altogether be consumed by the fire. But a bone of its own nature is cold and dry, having but small moisture in it, which the burning doth wholly consume, and so accidentally, the moisture being consumed, the body waxeth white.

Q. Why do some women love white men, and some black?

A. There are two answers: some women have a weak sight, and such delight in black, because white doth hurt the sight more than black. The second reason is, because like delight in the like; but some women are of a hot nature, and such are delighted with black, because blackness doth follow heat. And others are of a cold nature, and these are delighted with white, because cold is the mother of whiteness.

Q. Why do living creatures sleep?

A. For necessity, because the instruments of divers actions are wearied by being long awake; and by rest, which is in sleep, they are comforted, as Aristotle saith.

Q. Why are students ready to sleep after dinner, if they go about to study, or if they solace by themselves?

A. Because, when a man doth apply his mind to study, the natural heat goes from the outward parts of the body to the inward, and there it strengtheneth, because there cometh much of it together, and causeth a fume to ascend from the meat to the head, which is the cause of sleep. Or else we may answer, that when the power, or virtue, with which we sleep, is strongest, the natural power is weakened; but when a man doth solace himself by his pleasure, the natural heat is spread abroad, and suffereth no vapour to ascend unto the brain, and so

sleepeth not, but is kept from sleep by reason that the heat is dispersed.

Q. Why do men willingly sleep after labour?

A. Because that, thro' continual moving, the heat is dispersed to the external parts of the body, which after the labour is past, gathereth together to the internal parts of digestion, there to digest; and from digestion vapours do arise from the heart to the brain, which do stop the passages by which the natural heat should be dispersed to the external part; and then, the external parts being cold and thick by reason of the coldness of the brain, sleep is procured. And by this it appeareth, that such as eat and drink much do sleep much and long, because great store of humours and vapours are bred in such, which cannot be digested and consumed of the natural heat.

Q. Why are such as sleep much, evil disposed and ill-coloured?

A. Because that in sleep much moisture is gathered together, which cannot be consumed, which is expelled in making, and so it doth covet to go out thro' the superficial part of the body; and especially it resorts to the face, and so is the cause of a bad colour, as it appeareth in such as be phlegmatic, who desire more sleep than others.

Q. Why doth it appear unto some, in their sleep, that they eat and drink sweet things?

A. Because the phlegm, drawn up by the jaws, doth distill and drop to the throat; and this phlegm is, after a sort, sweet, and therefore that seemeth so to them.

Q. Why do some dream in their sleep that they be in the water and drowned, and some that they be in water and not drowned? and this doth happen especially in such as are phlegmatic.

A.

A. The reason is, as Aristotle saith, because the phlegmatic substance doth turn to the high parts of the body, and then they think they are in the water and drowned; and when the substance draweth unto the internal parts, then they think they escape. Another reason may be over-much repletion and drunkenness; and therefore, when a man is overmuch filled with meat, the fumes and vapours ascend and gather together, and therefore they think that they are drowned and strangled; but, if they cannot ascend so high, then they seem to escape.

Q. May a man procure a dream by an external cause?

A. Aristotle holdeth that it may be done, if a man do speak softly at a man's ear, and awake him, then, of this stirring of the spirits, there are thundrings and buzzings in the head, and so they dream of that. And so some men have dreams by divine revelation, when it pleaseth God to send any.

Q. How many humours are there in man's body?

A. Four, whereof every one has its proper place in man's body. The first is choler, which physicians call flava bilis, as it is placed in the liver. The second is melancholy, called atra bilis, whose seat is in the spleen. The third is phlegm, whose place is in the head. The fourth is blood; whose place is in the heart.

Q. What condition and quality hath a man of a sanguine complexion?

A. He is fair and beautiful, he hath his hair for the most part smooth; he is bold; he retaineth that which he hath conceived; he is shamefaced, given to music, a lover of sciences, liberal, courteous, and desires no revenge.

Q. What properties do follow a phlegmatic complexion?

A. They are dull of wit, their hair never curls,
C 5 they

they are seldom very thirsty, they are much given to sleep, they dream of things belonging to the water, they are fearful, covetous, given to heap up riches, and are weak in the act of venery.

Q. What properties do follow the choleric man?

A. He is furious and angry, quarrelsome, given to war, pale coloured, and unquiet; drinks much, sleeps little, and desires much the company of women.

Q. What properties do follow the melancholy men?

A. He is unquiet, brown in complexion, his veirs hidden; he eateth little, and digesteth less; when he dreameth, it is of dark confused things; he is sad, fearful, exceedingly covetous, and incontinent, unless he bridle his affection.

Q. What dreams do follow these complexions?

A. Pleasant merry dreams do follow the sanguine complexion; fearful dreams the melancholy; the choleric dream of children, fighting, and fire; and the phlegmatic dream of water. And this is the reason why a man's complexion is said to be known by his dreams.

Q. What is the reason that, if you cover an egg over with salt, and let it lie, in a few days all the meat within is consumed?

A. The great dryness of the salt doth consume the substance of the egg: but in sand some say they may be kept as long, as the mariners do practise.

Q. Why is the melancholy complexion the worst of all?

A. Because it is the dregs of the blood, which is an enemy to mirth, and farthest from the beginning of man's life; and it bringeth old age and death, because it is cold and dry.

Q. Why are the phlegmatic for the most part dull of wit?

A.

A. Because that the vivacity of wit proceedeth of heat, so of cold the contrary, which they are subject unto.

Q. Wherefore doth it proceed that some men die with extreme joy, and some with extreme grief?

A. Over-great joy doth over-much heat the internal parts of the body: over-much grief doth drown and suffocate the heat; the which failing, a man dieth.

Q. Why hath a man so much hair on his head?

A. The hair of the head proceedeth of the vapours which arise from the stomach and ascend to the head, and also of the superfluities which are in the brain; and these two, passing through the pores of the head, are converted into hair, by reason of the heat and dryness of the head. And because man's body is full of humours, and hath more brain than other creatures, and also more superfluities in the brain, which the brain expelleth it followeth that he hath more hair than other living creatures.

Q. How many ways is the brain purged, and other hidden places of the body?

A. Four; the watery and gross humours are purged by the eyes, melancholy by the ears, choler by the nose, and phlegm by the hair.

Q. What is the reason that some blush and change colour when they hear that which they would not?

A. Shamefacedness is a kind of anger; displeasure and fear joined together; as when a man is offended against himself, or against another; and therefore, when we see or hear something to be discovered which ourselves have done naughtily, or would not have known, the anger that we conceive is greater than the fear, and therefore the blood runneth to and fro, and in the end remaineth in the highest parts of the body, until the spirits be pacified, and the

Q.

Q. What is the reason that such, as are very fat in their youth, are in danger to die on a sudden?

A. Such have very small and close veins, by reason of their fatness, so that the air and the breath can hardly have free course in them; and thereupon the natural heat, wanting some refreshment of the air, is put out, and as it were quenched.

Q. Why do garlick and onions grow after they are gathered?

A. It proceedeth of the great humidity which is in them.

Q. Why do men feel cold sooner than women?

A. Because that men, being more hot than women, have their pores more open, and therefore the cold doth sooner enter in them than into women.

Q. Why are not old men so much subject to the plague as young men and children?

A. They are cold, and therefore the pores are shut up, and not so open as in youth; and therefore the infecting air doth not penetrate so soon as when they are open, as in youth, by reason of heat.

Q. What is the reason that lime is set on fire, and on a greater heat, by casting water on it?

A. Lime is hot of nature, and therefore, when water is cast on it, it fleeth from the cold; and by uniting its force, gathereth a greater heat and strength, and so is set on fire. And that is also the reason that a candle doth burn faster in winter than in summer; for then, by reason of the encompassing cold, the heat uniteth itself, and so doth consume it the faster.

Q. Why do we cast water into a man's face when he swooneth?

A. Because that, thro, the coldness of water, the heat may run to the heart, and so give strength.

Q.

Q. Why are those waters best and most delicate which run toward the sun rising?

A. Because they are soonest stricken with the sun-beams and made pure and subtle, because the sun hath them long under him, and by that means takes of the coldness and gross vapours, which they gather in the ground they run through.

Q. Why have some women such weak small voices?

A. Because their instruments and organs of speaking, by reason they are cold, are small and narrow; and therefore receiving but little air, causeth the voice to be small and effeminate.

Q. Whereof doth it proceed, that want of sleep doth weaken the brain and the body?

A. Much watching doth engender choler, the which being hot, doth dry up and lessen the humours which conserve the brain, the head, and other parts of the body.

Q. Whereof doth it proceed that vinegar doth staunch blood?

A. It proceedeth of its cold virtue; for all cold naturally is binding, and vinegar, being cold, hath the like property.

Q. Why is the sea-water saltier in summer than winter?

A. It proceedeth from the heat of the sun, seeing by experience that a salt thing being heated becometh more salt.

Q. Why is smoak contrary to the eyes?

A. Because in the eyes there is a delicate and pure crystalline humour, and the eye is also cold and without any colour at all, and the smoak is fofs and hot, and by that means doth pierce the humours of the eyes and hurt them; and if the eye had any colour in it, all things set before it would seem

to be of the same colour. And because the eyes are cold, and the smock hot, it doth cause the vapours, which are contained in the eyes, to drop and distil, which is hurtful to the eyes.

Q. Why do men live longer in hot regions than in cold?

A. Because they are more dry, and by that means the natural heat is better conserved in them than in cold countries, because the cold doth extinguish the heat.

Q. Why is well-water seldom or never good?

A. All water, which standeth still in the spring, and is never heated by the sun beams, is very heavy, and hath much earthy matter in it; and therefore wanting the heat of the sun, is naught.

Q. Why do we sleep better and more at ease on the right side than on the left?

A. Because, when we lie on the left, the lungs do lie upon and cover the heart, which is on that side under the pap. Now the heart, the fountain of life, being thus occupied and hindered with the lungs, cannot exercise its own proper operation, as being over much heated with the lungs lying on it; and therefore, wanting the refreshing of the air which the lungs do give it, like the blowing a pair of bellows, it is choaked and suffocated; but, by lying on the right side, these inconveniencies are avoided.

Q. Whereof doth it proceed that the holding of the breath doth cause yexing to cease?

A. Because the holding the breath doth heat the internal parts of the body. And this heat chafeth away the yex, which is nothing else but a cold air within the body.

Q. What is the reason that old men sneeze with difficulty?

A.

A. Because that thro' their coldness, their arteries are very narrow and close, and therefore the heat is not of force to expel the cold; for I think sneezing is like the combat in the air made by thunder, which is caused by heat and cold.

Q. Why doth a drunken man think that all things about him do turn round?

A. Because the spirits, which serve the sight, are mangled with vapours, fumes, and the wine; and then the over-much heat causeth the eye to be in a continual moving; and the eye, being round, causeth all things about it to seem to go round.

Q. Wherefore doth it proceed, that bread, which is made with salt, is lighter than that which is made without it, considering salt is very heavy of itself?

A. Altho' bread is heavy of itself, yet the salt drying it, doth make it light by reason of the heat which it hath, which heat doth dry; and the more heat there is in it, the better the bread is, the lighter and more wholesome for the body.

Q. Why is not new bread good for the stomach?

A. Because it is full of moistness and thick and hot vapours, which do corrupt the blood; and hot bread is blacker than cold, because heat is the mother of blackness, and because the vapours are not gone out of it.

Q. Why doth lettuce make a man sleep?

A. Because they engender gross vapours.

Q. Why do the dregs of wine and oil go to the bottom, and those of honey swim uppermost?

A. Because the dregs of wine and oil are earthy, and no way purged before; and therefore, being of the nature of earth, do go to the bottom; but honey is a liquor which cometh from the stomach and belly of the bee, and there in some sort, purified and made subtle; and by that means that which re-

mains is light and hot, and therefore goes upwards.

Q. Why do cats and wolves eyes shine in the night, and not in the day?

A. The eyes of these beasts are by nature more crystalline than the eyes of other beasts, and therefore do shine as they do; but the brightness of the sun doth hinder them to be seen in the day-time.

Q. What is the reason that some men, when they see others dance, do the like with their hands and feet, or by some other gesture of the body?

A. The answer is, because the sight has carried and represented unto the mind that action, and judged the same to be pleasant and delightful, and therefore (desiring it) the imagination draweth the likeness of it in conceit, and stirreth up the body by the gestures.

Q. Why doth much sleep cause some to grow fat, and some lean?

A. Those which are of ill complexion, when they sleep, do consume and digest the superfluities of that they have eaten, and therefore become fat. But such as are of good complexion, when they sleep, are much more cold, and so digests less.

Q. How, and for what cause, do we suffer hunger better than thirst?

A. When the stomach hath nothing to consume, it consumeth the phlegm and humours which it findeth most ready and most at hand; and therefore we suffer hunger better than thirst, because the heat hath nothing to refresh withal.

Q. Why doth the hair fall after a great sickness?

A. Where the sickness is long, as an ague, the humours of the head are dried up thro' overmuch heat, and therefore, wanting nourishment, they fall.

Q. Why do the hairs of the eye-brows grow long in old men?

A. Because that, thro' their age, the eye-lids are thin, by reason of the want of heat, and therefore, the hair doth grow there, by reason of the rheum of the eyes. The like doth happen in such as imagine much, because that with their heat they draw up many humours to the fore-part of the head, where the imagination is placed.

Q. Whereof proceedeth gaping?

A. Of gross vapours, which occupy the vital spirits of the head; and the senses are cold, making them ready to sleep.

Q. What is the reason that some flowers do open with the sun-rising and some with the sun-setting?

A. Cold doth close and shut, as hath been said; but the heat of the sun doth open and enlarge; some do compare the sun to the soul of the body; for, as the soul giveth life, and when it departeth, death followeth; so the sun doth give life, and vivify all things; the cold bringeth death, withering and decaying all things.

Q. Why doth grief cause men to grow old and grey?

A. Age is nothing else but a dryness and want of humours in the body; grief then causeth alteration, and alteration heat, and heat dryness; age followeth immediately, and greyness.

Q. Why are gelded beasts weaker than such as are not gelded?

A. Because they have less heat, and, by that means, less force and strength.

THE PROBLEMS OF

Marcus Antonius Zimara Sanctipertias.

1. **W**HY is it esteemed, in the judgment of the most wise, the hardest thing to know a man's self?

It is because nothing can be known of its form and perfection, which cannot be found; to know the form and perfection of a man's self, as it cometh unto the philosopher, is a matter hard enough, and a man, by the authority of Plato, either is nothing, or if he be any thing, he is nothing but his soul. Or, it is because it cannot be done by a reflected action; and to reflect and look unto himself is a token that he is separated by the flesh: for he, who would know himself, should be drawn from sensible affections; and how hard this is, no man is ignorant of. Or, is it because a man liveth by understanding? But the understanding of a man cannot conceive himself but after the understanding of senses, which is very hard.

2. Why was Socrates esteemed the wisest of all Greece by the oracle of Apollo, seeing that, by the opinion of Aristotle, he was conversant and busied only about mortality, and nothing about nature?

Whether it is because it is more expedient for the common commodity and use of men to live well than to contemplate; or because as Plato used to declare, (what was usually professed of him every here,) I know one thing, that I know nothing.

3. Why

3. Why do men especially contend and strive in things of wit?

It is because they think that other things, which are called goods, are in the power of another, as the gifts of the body are nature's, and external and worldly goods are subject unto the rule of fortune: whereof it cometh to pass, that every man can easily suffer himself to be overcome in such things, as things not happening thro' his fault or occasion, but they think wit to be in their own power. Or, it is because they think that the goods of the mind do excel all other goods, and therefore do think it is a thing most natural to contend for that which is most excellent. Or, because it is a common disease of all men, as it seemeth unto a certain wise man, that every man doth think himself more learned than he is, and therefore doth desire to perform that which he believeth without study and labour.

4. What is the cause that few men take pains in the attaining of sciences, seeing that all men desire to know?

Whether is it because the gods have put virtue to be begotten with sweat and labour, as Hesiod saith? or, because the pleasures of the body do draw a man's mind from the searching out of the truth? It is requisite for him who desireth to live in mind, that he think and meditate on the earth of the body, as the divine Plato doth think: or, it is because the nature of a man is forced to serve many ways, whereof it falleth out that, when things necessary do fail, the natural desire is not brought into action; for nature of herself is able to contemplate.

5. Why do men say that philosophy is naked?

It

It is because truth is naked, and that there needs no colour of words when we handle a matter of truth, for it belongeth to sophisters to dispute of terms, when the sincere truth is sought: or, it is because they do not play the philosopher well, which seek philosophy for gain and ambition, and not for herself; or it is because he should be void from all worldly affections, who desireth to perfect himself in the study of philosophy; for Aristotle doth say, the soul is made wise by rest and quietness. And it were easy for philosophers to become rich if they would, as it appeareth by the example of Thales.

6. Why do men desire to be had in memory after their death, and therefore some make pyramids, statues, images, and divers other tokens and monuments, which they build and leave behind them?

It is because all things, as seems unto Aristotle, do desire to participate of some perpetuity and divine being, as much as they can; and, therefore, if they cannot remain in nature and being, yet they endeavour at the least to continue in the opinion and conceit of men. Or else hath custom brought it in so, to stir up such as come after, to the end they should not degenerate from their parents.

7. What is the cause why men's desires grow without measure about fortune's goods?

It is because natural desires, as Seneca saith, have an end; and such desires, as proceed of false opinion, have no where to end.

8. Why do poets always assign and appoint some wise men to be familiar with princes? as Homer doth Nestor with Agamemnon; Euripides, Tiresias with Creon: Hesiod, Prometheus with Jupiter: and Maro, Achates with Aeneas?

It is because that, by the law of nature, as Plato doth say, wisdom and power do direct our actions to one end, and affect the same thing, love it, and seek it.

9. Why doth Homer, when he makes mention of ambassadors, talk always of the embassy of a commander in bare words?

It is because it is the duty of ambassadors to declare the bare will of the commander, and put his sentence in execution; and therefore it is certain he should neither add nor take away any thing: or else, it is because the commandment of him who doth rule, that is, of a wise man, is put into good order, and is presumed to be most perfect; and therefore there should be nothing changed, but his decrees and constitutions are to be judged absolute and perfect.

10. Why doth Aristotle use exceeding brevity in most hard matters?

Whether is it because it is the custom of wise men to load their words with sentences, or else to the end that he would be obscure, to deter and keep off rude wits from reading his works, as it seemeth to the expositors? Or, whether is it because that in a hard matter, and in a matter of truth many words are suspected, because that truth doth consist in a few words? or is it because it seemeth to the wise men that in many words there is error often committed?

11. Why do famous men in any science, when they do err in any matter, err more dangerously than those which are less famous?

It is because that such, trusting to the heat of their own wit, are drawn far from their own senses, and therefore must needs be deceived? Avicen may serve for a proof of this, who, for all his fame

in philosophy, said, that a man might naturally be brought forth of the earth. And that great famous Averroes, who thought that a maid might conceive with child in a bath, without knowledge of a man.

Out of ARISTOTLE.

Q. Why is a man, being endued with reason, the most unjust of all living creatures?

A. It is because thro' conceit he is much given to pleasures, and therefore seeks out and weighs what felicity is, which none can obtain without injury.

12. Why do men desire rather to seem good, than to be and not seen?

It is because man only is desirous of honour; so it comes to pass that every one covets to seem good, and yet naturally shuns labour, tho' he attains no virtue by it. Or else it is because the nature of a sophister is rather to seem, than to be, and not to be seen; but very few do attain to true virtue.

13. Why do some in their youth beget girls, and in their middle age, or when old, beget boys?

It is because the seed waxeth cold in such as use carnal copulation too oft, and therefore in their middle age, when they grow tired, their seed is hotter, and so produceth males.

14. Why have children, or boys, pleasure in the act of venery, seeing they do not cast forth seed?

It is, as the philosopher saith, because there is certain tickling in the letting out the spirit of breath, as it is in such as are of age by casting forth seed.

15. Why have these least pleasure who use the act of copulation oft?

By oft using carnal copulation the spirit and seed do increase and wax cold, and therefore are not so itching or tickling, which is of delight.

16. Why do immoderate copulation do more hurt than immoderate letting of blood?

It is because the seed is fuller of spirit and nutriment, better disposed and prepared for the nature of the body than the blood; for, says Galen, the seed is the cause of the substantial parts of the body, and of it the body grows and is nourished. And as he who is hungry, is hurt more by taking away bread than flower, so the body is more weakened by taking away seed than by evacuating blood.

17. What is the reason that such as have a very long yard cannot beget children?

Because, when the seed is going a long distance, the spirit doth breathe out, and therefore is cold, and unfit for generation.

18. Why do such as are corpulent cast forth little seed in the act of copulation, and are often barren?

It is because the seed of such goes to nourishing the body: for the same reason corpulent women have but few menses.

19. How come women to be prone more to venery in the summer-time, and men in winter?

It is because at that time his testicles hang down, and are feebler than in winter; or else, because hot natures becoming lively: for a man is hot and dry, woman cold and moist, and therefore in summer the strength decays, and that of women encreases, and they grow livelier by the benefit of the contrary quality. And, for the same reason, some beasts of a cold nature, lie in dens and holes, and, thro' the frigidity of the air, receive little or no nourishment, but revive again when heat comes.

20. How comes man to be proudest of all living creatures?

It is by reason of his great knowledge, or that, (as the philosophers say) all intelligent beings having understanding, nothing remains that escapes man's knowledge in particular; or that, because he hath rule over all earthly creatures, all things seem to be brought to his arbitrement; or, shall I answer, that the pride of man proceeds from his not knowing himself? for truly, would he remember that he is but dust and ashes, that he came naked into the world, and is born to eat his bread in the sweat of his brows, and after all born to die, he would abhor pride.

21. How comes one man to understand one thing and do another?

Is it because there is the same science of contrary things? or because the office of the mind is to reach at many things, and the appetite tends to one only? and so a man chiefly lives by understanding and reason, but beasts are governed by appetite, anger, and pleasure.

Out of ARISTOTLE.

22. Why is a man wisest of all living creatures?

Because he hath a very little head in respect to the proportion of his body; or else because he is of a most perfect nature, and therefore the habits of virtue are more perfect in him. Or is it because the blood of a man is most subtle, pure, and clean? The blood is the nutritive, and therefore there is great difference, whether cold or hot, thin or thick, muddy or clear: for it is by reason that thro' his own constitution he hath a most perfect sense of feeling, as experience shews in men; for, because they have soft flesh, they are endued with a sharp and quick wit; and they, whose flesh and skin is thick

thick and gross, are dull and slow ; wherefore the temper of man seems more adapted to prudence and wisdom : for this reason, in a soft and tender body, the first and more motherly spirit of the soul is easier infused, and doth more willingly and speedily discourse : on the contrary, the hardness and thickness doth stop, and therefore is a hindrance that the pure blood, whereof the spirits are engendered, is not carried from place to place ; for to every man is given a certain portion of spirit to work withall.

23. How come most womens wits to be unapt in good things, and most prompt in naughty, as says Euripides ?

Because of a privation, which seems to be coupled and joined to her nature : for, as a woman is a man's hurt, so the faculty of a privation is always to do mischief.

24. Why do men say a woman's first counsel should be chosen ?

Because (as we see in things that want reason) their actions and motions are guided to their proper ends by a superior power ; for I think that is very true which is said, that there is a providence which puts into a dishonest heart the desire of honesty ; and, in a poor man, the desire of wealth, as far as sufficient. So a woman's understanding, tho' she know not the reason of good and evil, is sometimes directed, by an infallible truth, to take some things in hand ; but some things they undertake of themselves, are to be let alone, as weak, and subject to many errors.

25. How comes it women desire to go fine, and deck themselves, rather than men ?

It is because by nature they are imperfect, so they endeavour to supply imperfection by art ; or

else it is because they want the beauty of the mind, to study to adorn their bodies.

26. How comes it a tall man is seldom wise?

By reason the largeness of his body proceeds from excess of heat and abundance of humidity. Some wise men think the perfection, accomplishment, and goodness of the operation are perfected by dryness, which doth always go on and increase till it brings us to our end; for the constitution of the body originally sprang from the last humidity, but the vehemence and excess of heat overthrow the judgement and hinder quietude.

27. Why is a multitude of princes or rulers naught, as Homer saith?

It is because, if the government should dwindle into tyranny, it is better to be under the yoke of one than many: or because a multitude of rulers seldom regard the good of the public. Hence it proceeds, that if once they disagree, great hurt is like to befall the commonalty: it is easier for one man to be well given than many; in the government of many there want not strife, debate, and envy. Wherefore it is justly said, that a multitude of rulers are naught: for which reason let there be but one prince at a time.

28. Why have beasts their hearts in the midst of their breast, and man inclining toward the left side?

It is because it should moderate the cold on the left side; for, Aristotle says, man hath only the left side cold. Or is it, as physicians say, because it should give place to the liver, which is on the right side?

29. Why doth a woman love that man best who had her maidenhead?

It

It is because that the matter doth covet a form or perfection, so doth a woman the male. Or it is by reason of shamefacedness; for, as Plato saith, shamefacedness doth follow love. Or is it because the beginning of great pleasure doth bring a great alteration in the whole, whereby the powers of the mind are much delighted, and stick and rest immovable in the same. Hesiod advises to marry a maid.

30. How comes the night, in the full moon, somewhat warm, since (according to the mathematicians) the moon is cold by night?

Perhaps, because the opinion of the Peripatetics ought to be preferred, which says, every light heats in that respect it is reflected.

31. How comes the night in autumn colder than in spring?

It is because the air is very thin; and bodies that are rarified are very apt to receive heat or cold; as is seen in water easily; for water heated doth sooner freeze than cold, because it is rarified by heat.

32. How are bodies sooner hurt with cold in autumn than in spring?

It is because the bodies which are accustomed to cold do, in spring, receive heat, and therefore the moving or mutation is natural, and not surprizing. But in autumn they hasten from heat to cold, not being accustomed, and without any mean. Nature loth not endure sudden change, Galen says.

33. How come hairy people more lustful than others?

Because in them is supposed great store of excrements and seed, as philosophers assert.

34. How comes it that men, which have small heads, are naturally angry and testy.

Because

Because, when the head is little, (and the brain so of course) the heat of the heart cannot be moderated with the heat of the brain as it ought to be, and anger proceeds of the boiling of the blood about the heart, thro' something vexatious.

35. How comes the fundament of a man to close after he hath made water?

Because the air runs presently to fill that which is empty, and so the parts of the body are altered by the coldness of the air, which causes trembling.

36. Why have some men died thro' grief, some thro' joy, but more thro' anger?

Because joy cools the very inward guts; grief or sorrow do suffocate and choak the inward parts, and cool the outward; but anger heats both; while heat remains, life and nature do so too, because the soul is counted the life and natural heat.

37. How doth the voice change in people when they begin to have seed?

It is because that heat is the beginning of veins and blood, as Aristotle saith against the physicians; and thereupon it raiseth, that, because the change of the excrements of seed is made in the highest part of the body, the voice being above makes it manifest. And thereupon it is that the voices both of men and women do change when they begin to have seed.

38. How comes it that when a pot full of boiling liquor is seething, yet the bottom is cold?

It is because the hot vapours ascend upward, and therefore, when the uppermost water is hot, the bottom at the same time is cold, by reason of the coldness of the water adjoined unto it.

39. Why is the grain which we find in the ants holes, and gathered in summer-time, gnawn at one end?

It is because they are directed of nature to gnaw and consume that end, where the virtue of seeding for fear it sprout again, lest by sprouting and wing, they should be deprived of the nutriment being necessary unto themselves.

10. Why do children love their mother more frequently than the father?

It is because they take great pains with them, on cause of the great certainty which they have of themselves, as Aristotle saith.

11. Why is not the father as well beloved of the son as the son is of the father?

It is, as the wisemen say, because love does not look backward, but always forward; because love by nature serve such a life to continue the same; where it comes to pass, that our natural desire neglecting things past, look to things to come. It is, (as the philosopher saith) because the father loves something of his in the son, the son nothing of himself in the father.

12. Why do children; for the most part rather love the mother than the father, seeing (as Aristotle saith) the mother doth not concur actively in begetting of the child?

Perhaps because all similitude and likeness in man and nature are virtually contained in the seed of the father; whereby it is, for the most part, the father is like neither, but the grandfather, or great grandfather, and sometime like none of the family; It is because this doth proceed of a strong nature, in such as are wont wonderfully to love their wives; for, as Avicenna doth affirm, the body is somewhat changed by affections, which are called *animales*, for they do print deep impressions of natural things; as it doth happen that the child represents him whose portraiture and image were before.

fore-conceived in the act of carnal copulation of men and women. But some of the vulgar sort, who know not the cause of things, are not content with this doctrine, but the wise agree and assent unto it. And therefore it cometh also to pass, that the blood runneth and goeth to the external parts in him who conceit of red things into his mind. And so men's teeth are set on-edge when they see another eat soft things; and, when we see another diseased or grieved in any part, the same part in us doth languish and grieve, and often also the constitution of the body is changed through excessive heat.

43. Why are asses more nimble, as the proverb is, when they are young, than at any other time?

Because their nature and constitution being melancholy from the beginning, it is requisite there should be a temperance with the recompence of contrary qualities; for melancholy by nature is cold and dry, but, when they are young, they are hot and moist. This also we see in melancholy children; they which in their childhood are of great wit, and before it looked for, are of great wisdom, insomuch that they may hope and promise any thing in time to come, whose wit nevertheless, in progress of time, doth decay and fade. Be therefore (saith the Great Naught), to the end that thou mayest live, for the nature of flesh is most short.

44. Why be there no asses in Pontus and Scythia?

It is because their nature is most impatient of cold, as the philosophers do say.

45. Why are clergymen and women most covetous?

It is because the habit of virtue is bred of many actions; and therefore, seeing that priests want wives and children, they are forced many ways to increase their goods, and yet are accustomed to take and receive, and so become covetous; for, as the philo-

her doth say, such as every man's actions are, such
 he become. The nature of women (as we have
 ten said) is imperfect, therefore they think it im-
 possible fully to satisfy themselves; and therefore
 they gather together and keep that by which means
 they may help their need; and by industry and art
 they covet to get that which nature does not give
 them. And for the same reason (I suppose) old men
 overcome themselves to covetousness; for wanting, and
 being destitute of helps by age and nature, they
 strive after the goods of fortune, that with them
 they may provide for themselves against all wants.

46. Why do wounds grieve less in war than out
 of war?

It is because the powers of the soul bend another
 way: for, as the philosopher doth say, if our mind
 is strongly fixed on other matters, we do not see
 those things which are before our eyes: or whe-
 ther is it by reason of anger, which, as wise men
 say, doth heat the internal and external part? and,
 Aristotle affirms, with the heat the soul works
 things; and therefore it happens that the angry
 man grows but slowly after his wound, and therefore
 he doth less grieve and heat.

47. Why do we wonder at an eclipse of the sun
 and moon, and not at all at the generation of plants
 and beasts by seed?

Because our admiration ceaseth in things which
 are usual, and our mind neglecteth to search out the
 truth in such things; but that which happens sel-
 dom doth stir us up to wonder, and induceth the
 understanding to search out the cause.

48. How comes it that the head-ache, dulness of
 memory, and an evil disposition of imagination, do
 follow the long detaining of the seed?

It is because it doth hinder and make heavy the
 brain by excess of seed; or because the seed, long
 kept

kept, getteth some venomous quality, and therefore the fume and vapour of it do hurt the head.

49. How comes it that priests and monks feare and abhor death more than any men?

It is because they are by nature cold and melancholy: or, because they perceive themselves perishing utterly: for, when they are out of this world, they neither continue in their own nature, nor in posterity.

50. Why do trees when they cast their leaves and beasts their hair and feathers, receive them again, and if a man become bald his hair groweth no more?

It is because the time of the year doth bring the change of bodies; so that in the first change the followeth an interchangeable course one after another; and beasts receive their feathers and hair, and trees their leaves; but baldness cometh to man through age, and nature giveth no coming again to age.

51. Why doth summer end all diseases?

If force and nature be strong it shall find air more fit for resolution and digestion, and expulsion of superfluities; if weak and overthrown, the heat doth overthrow it more. It doth loosen weak bodies, and therefore there cometh nothing unto the sick but death.

52. Why, if a man put his hands into the water in summer, is he colder if the water be moved than when it standeth still?

It is because that part of the water, which toucheth his hands, is hot by the heat of his hands: and every agent, which doth communicate with the patient in the things whereon it worketh, in doing doth suffer again; and, the water being moved, it is necessary that the parts of it, which are rarified, be scattered abroad, that others more cold succeed the

53. Why do some, which have an evil complexion and constitution of body, live longer than some others which are of a sanguine and better nature?

Perhaps from bad government and order; or because there is some hidden cause in those dispositions; for, as Averroes saith, the number of the elements is infinite in works of nature, the which none besides the Author of nature doth understand.

54. What is the cause, as physicians say, that the suffocation of the matrix, which happens to women thro' strife and contention, is more dangerous than the detaining of the flowers?

Because by how much the more an excrement is perfect so long as it doth continue in its natural disposition, by so much the more it is worse when it is removed from that, and drawn to the contrary quality? as it is seen in vinegar, the which is sharpest when it is made of the best wine. And so it happens, that the more men love one another, the more they hate when they fall to variance and discord.

55. Why doth the land, which standeth still, seem to move unto such as sail by sea?

It is because the nutriment of the sense of seeing is accidentally moved when the ship is moved, whereby the likeness and similitude of things are perceived and received with the moving.

56. Why do we love our sight above our other senses?

As Aristotle doth say, because it both shews us the difference of things, or because its knowledge is more drawn from material substance. Or it is because the divine force of love is placed in that sense, Plato saith.

57. Why do we not judge a staff to be broken in the water, seeing it doth so appear in the sense of sight?

Whether

Whether is it because we perceive, by the sense of feeling and touching, that the sight doth err? Or, is it because we do not judge with the same power as we do imagine with? An argument of this is, that the sun doth seem to be but a foot round; and, by a trick and moving of the finger, one finger doth seem two, yet we do not yield they be two.

58. Why do we put our hands over our eyes when we will see any thing afar off?

It is because the light should not be dispersed; and so, Aristotle saith, that those which have their eyes standing out cannot see far: and, contrarily, such as have them hollow in their head can see far, because the moving of the sight is not scattered.

59. Why can some see the object before their eyes afar off, better than if it be near to the eye?

It is because things, which may be seen, cannot be seen but by the mean of bright eyes; and weak eyes do want more plenty of light, than strong eyes. But the object being put afar off from the sense of the sight, in the distance from the thing seen, doth require a greater light than good eyes need; and, the farther the object is, the more light there is in the distance betwixt the object and the sight; or else, because the motion, which proceedeth from an object far distant, unto a weak sense is weak, which the sense can well endure: but the motion which is hard by is strong, which a weak eye cannot suffer; which is easily seen in old men, who, by reason of their weakness, do see afar off, and can read small letters in the light of the sun; who notwithstanding cannot hard by them see, nor read at the light of a candle, nor the moon.

60. How do some people discern things near them, and not at a distance?

It is through the weakness of the sight, for in such the power of seeing is very weak; therefore they do need a strong moving; as it is also in such who have their eyes standing out; who cannot see far.

61. Why do such, as would shoot aright, wink with one eye?

Because the sight is more strengthened and united, and so fitter to perform this action.

62. Why are such as have been long in the dark, on a sudden if they come into the light, half blind?

It is because nature cannot endure those sudden mutations: or because the spirit of the sight is small and weak, and therefore is glad of the like, and so dissolves when they come into the light? Or else it is because of the desire of that light they wanted before, which when they behold too earnestly, their sight is weakened; as it happens in some who have a long time endured famine, and then, eating greedily, take more than they can digest, and so perish.

63. Why do such as are purblind for the most part write small, when (one would think) it is a property belonging chiefly to strong eyes?

Because things hard by seem great, and such are wont to write with their eyes close to the paper; or else they always write winking; or, if they write with their eyes wide open, their sight being dispersed, would wax dim, and by winking, they discern more readily; and since, thro' winking, the stage of the sight is rendered narrow, they must necessarily make a small letter.

64. For what reason doth a man see better in the night, if he bows his head toward the ground, than if he stand upright?

Because the obscure vapours, which make the air dark, are thicker above than near the earth, and so hinder

hinder the sight more being distant than near the ground. Or it is because the light of the stars, being dispersed thro' the air, causes a reflection near to the earth, tho' weakly, and so by these means, doth reflect a light on the face of the earth.

65. What is the cause that if a man has committed an evil fact, he cannot dissemble it in his countenance? For the poet says, O how hard is it not to betray a fault with the countenance!

It is because the eye is messenger of the heart, as a glass in the mind, wherein all things do shine: or, as it is the weakest part of the body, and fullest of passage; for which reason all alterations, which begin in the heart go directly to the eyes.

66. How comes gaping to stop the hearing?

Because the instrument of hearing ends at some spiritual parts, whereby it comes to pass that it is shaken or moved together as oft as that spiritual part moves the air. Or, it is because much air doth enter in at our ears when we gape, therefore sense and motion cannot be perceived for its trussing at the ear. The air is in the nose, so that when the air within the ear is weakened, and that without doth enter, of necessity one hinders the other.

67. Why can nothing be the cause of its own generation and corruption?

It is because the mover must be before the thing moved, and the engenderer before the things engendered, or that it is impossible to be before itself.

68. How come womens bodies looser, softer, and less than mens? And why do they want hair?

By reason of their menses; for with them their superfluities go away, which would produce hair; and, the flesh being filled, consequently their veins are more hid than mens.

69. What is the reason that, when we think upon a horrible thing, we are stricken with fear?

It is because the conceit, thinking, and understanding of things, have force and virtue: for, Plato saith, the reason of things has some affinity with the things themselves: for the image and representation of cold and heat are such as the nature of the things, as the pl. lose

pher 1st said. Or it is, because when we comprehend any dreadful matter, the blood runneth to the internal parts; and therefore the external parts are cold, and shake with fear.

70. Why cannot a company or multitude of women be led under a captain without a tumult?

It is because they are inconstant by nature, and for the same reason the philosopher would appoint no shepherd over goats, because they were unstable by nature; or, it is because a woman is more prating, worse-tongued, and more back-biting; also complaining, and less wise and more lying than a man.

71. Why doth a radish-root help digestion, and yet itself remain undigested?

Because its substance consisteth of divers parts; for there are some thin parts in it which are fit to digest meat, the which being dissolved, there doth remain some thick and close substance in it, which the heat cannot digest.

72. Why do such as cleave wood, cleave it easier in length than athwart?

Because in wood there is a grain, if it be cut in length; as it is to follow the hair in cloth, which doth go in length, whereby, in the very cutting, one part draweth another fast by it.

73. What is the reason that if a spear be stricken on the end, the sound cometh sooner to one which standeth at the other end, than to one which standeth near to him which striketh?

Because (as it hath been said) there is a certain long grain in wood, directly forward, filled with air; but cross, or on one side, there is none; and therefore a beam or spear, being stricken on the end, the air, which is hidden, receiveth a sound in the aforesaid grain, which serveth for the passage of the air; and therefore seeing the sound cannot go easily out, it is carried into the ear of him who is opposite to him, and as those passages do not go from side to side, a sound cannot be distinctly heard.

74. Why are there not famous men in every faculty in our age?

Is it because the nature of man decayeth in our age? and, as Solinus saith, succession being corrupted, the progeny of our age is worse by birth? or is it because such are not esteemed of princes? for take away the reward due unto virtue, and no man will embrace it: or, is it ordained by nature, that men do always complain of the present time?

75. Why are flatterers in great credit with princes?

It is, as Plutarch saith, by the authority of Plato, because they love themselves; too much immoderate love of themselves causeth them to admire flatterers, and to give them credit; or it is, as I think, because they want the light of reason; for among birds, some, thro' the corruption of their nature, delight in stinking meat; and whom the day doth blind, the night doth lighten.

76. Why have philosophers, for the most part, in these days evil conditions?

It is because they are not esteemed of princes; or it is because of the philosophy itself; they are accused of crimes, and think therefore they are compelled to forsake virtue, and follow vice; or else, deceived thro' error, they think they have challenged all the garments of philosophy, when they have snatched to themselves some of her rags; and therefore they are by us rather called sophisters than philosophers; for certainly, a philosopher should be of a stout courage in all respects, and in all fortunes; for they reason badly, and therefore they should give themselves unto philosophy, because they would be honoured of princes: and their desire is not ruled by nature, but by errors, and they are thrust forward with streams of false credulity.

77. Why do such as are angry wax pale in the beginning, and afterwards red?

It is thro' the desire of revenge for that which grieveth, that the heat and blood are called unto the heart, and therefore, of necessity, the external parts are pale. When they are determined to put that in execution which they desire, the heat and blood do run into the outward parts, and then they are greatly to be feared and taken heed of.

78. Why do serpents want a yard and stones?

It is because they want thighs, and therefore do want a yard; and they want stones because of the length of the body.

79. Why can serpents turn their heads backward, and the rest of their body stand still?

It is because (like unto those creatures which are called Insecta) they are made of a winding composition, and have their joints flexible, and made of gristles; and this is the reason in serpents; and also because they may void all those things which hurt them; for, having no feet, and being long in body, they cannot easily turn them, whilst they bow against those things which are behind them. It were to no purpose to lift up their head if they could not exercise anger.

80. Why is aameleon changed into many colours? Because, as it seemeth unto the philosopher, he is the tenderest of all footed beasts engendered of eggs, and is dark cold for want of blood; the cause is to be referred unto the quality of the mind; thro' over-much coldness is of so many colours; or it is the property of fear to be fast thro' want of blood and heat.

81. Why are the thighs and calfs of the legs of men fleshy, seeing the legs of beasts are not so?

It is because men only go upright, and therefore nature hath given the lower part corpulency, and hath taken it away from the upper; and therefore she hath made the buttock, the thighs and calfs of the legs fleshy.

82. Why do very fat beasts wax old quickly, and soon die?

It is because they have but little blood, seeing much is taken up with the fat; and those, which have a small store of blood, are aptest to die; for death is the want of blood.

83. Why doth man only go upright?

It is because he is most hot of nature; or is it because his substance is divine? The part of divine things is to understand and be wise, which could not easily be, if a man had a great massy body, for heaviness doth make understanding and the sense slow.

84. Why is the flesh nearest the bone sweetest?

Whether is it because it receiveth temperature thro' the quality of the contrary? for the nature of flesh is hot and moist, and the nature of the bone is cold and dry, and therefore betwixt contrary extremes there must be a mean.

85. Why is it forbidden to talk when we eat?

Whether is it that before the weasand, by the which we eat and drink, the artery is put, by the which air and breath go into the lungs, and this artery is molested with meat or drink introduced in it? Yea, nature hath provided for this a little flap, which doth cover the artery, the which opens when we speak; and therefore meat cannot easily get into it, whereof follow choaking and coughs. Or whether is it because speaking doth hinder the chewing of the meat, and therefore the meat is not well digested?

86. Why doth wine mingled with water make a man drunk?

Perhaps because the water doth cause the wine to run hither and thither, and penetrate the more; and that is the reason it must, as Avicen. doth say, sooner make a man drunk than wine; because that the water mixed with it doth make it penetrate.

87. Why are noblemen, and such as are placed in high dignity, troubled with the gout?

It is because they crave divers sort of meat even to the full: and the physician doth affirm, that there is nothing worse than at one time to take divers sorts of meat, and then to be a long time in eating and drinking of them: for the first is half digested before the other come, and therefore such as remain long undigested breed raw and naughty humours, which run into the joints. Or it is by reason of overmuch pure wine, and too much idleness and exercise done out of due season; or it is thro' the over much use of lechery, which killeth digestion.

These things are greatly to be feared, lest we become stocks of brute beasts; for like unto the brute beasts, they are given to gluttony and the belly.

88. Why are they taken with sudden death which are laden with over-much fat, and especially when they are young?

Perhaps because their veins are strait, and therefore are stopped with fat, that the spirits cannot have free course; whereupon the heat which is bred within them doth kill them, because they cannot receive the cooling of the air. And therefore (as the physicians say) they would greatly fear lest their veins break, or their natural heat be suffocated.

89. Why can such be hardly let blood as are very fat, and not without great danger?

It is because they have very slender veins, and those hidden; or because all fat is without blood, as it seemeth unto the philosopher.

90. Why (as Aristotle doth affirm) are the powers in the heart, yet, if the hinder parts of the brain be hurt, the memory payeth for it; if the fore parts, the imagination; if the middle, the cogitative part?

It is because the brain is appointed by nature to cool the heat of the heart, whereof it is, that in divers of its parts it serveth the powers and instruments of the heart, for every action of the soul doth not proceed from one measure of heat.

91. Why doth it happen for the most part, that children, which are not lawfully begotten, are whiter, and subtiler, and more like the parents than others?

It is because the powers of the mind of the parents are vehemently bent in the act of copulation. Such do love exceedingly, and therefore, seeing that their affections be not distracted, the child by nature shall not vary from them; and this is most true when they go together with tranquillity of mind; for if it be with fear or grief, the children are unlike.

92. What is the reason, seeing death is by nature, yet it is more terrible unto men than unto all other living creatures?

It is because the nature of man, as the philosopher saith, hath purchased the mean, not only of living, but also of well living. For mankind only is partaker of supernatural things; other living creatures have regard unto that only which they see, wherein, as Pliny doth say, the goodness of nature doth suffice, which is to be preferred before all other things; and therefore they do

not

not think of glory, wealth, ambition, nor of death; wherefore, seeing that man is deprived of a more noble life, when he dieth, death is unto him, above all other, most grievous. Or, it is because all other living creatures regard only things present, and man only foreseeth things to come.

93. If death came by nature, why is it judged the last of all terrible things?

Whether it is, as seemeth unto the philosopher, because it is the last, and nothing else doth seem good or bad unto mortal men; or because we inveigh against nature, who is the beginning of necessity, and not the nature of the form, or the end from which that which is deprived, the which all things do desire. Or, peradventure, death doth seem the most terrible of all things, because they mean not to live, that they thought to be immortal. Or doth it strike a fear only unto them which lead a naughty life? for unto such as live a virtuous life, death is not grievous: as the poet saith, "Death is the end of a prison obscure." Or, are they grieved because they are seized with a violent and untimely death? For such as die when they come to old age do for the most part die without fear and grief; for truly nature is a candle ready to be put out. And, as Plato doth say, of all sorts of deaths, that which doth come by nature is most light, which happeneth rather with pleasure than choler.

94. Why, seeing that a man is the end of nature, is he of so short a life in respect of other living things, as poets do complain by the example of the crow?

Because the perfection of frail things is not measured at all by continuance of time; as the philosopher saith, it is far better to be very joyful for a short space, than a long time meanly or lightly glad; or because that the nature of things possibly doth always make that which is best; and it could not be that the constitution of man's body could be convenient and fit for long continuance and the operations of the soul. For, by the authority of the wise, there is required another temperature, first for life, and then for the works of life. Whether should they make use of a long life, and the worse; or of a shorter,

shorter, and the better? It seemeth good unto them, saith Plato, to prefer a short life and a good, before a long life and a bad.

95. Why doth nature bring forth man naked, and without defence?

It is because nature doth nothing without reason, or in vain. Seeing that man is most wise he can use many instruments to help him withal; the hand is not one instrument, but many. And therefore they think amiss, as the philosophers affirmeth, which say, that man is noblest of all creatures, and yet in worse case than all, because he is naked and weaponless; for other creatures keep their common help, and cannot change it by any means, but man can change his weapon at his pleasure; for the hand is a hoof, a horn, a spear, a sword, and every other kind of weapon. Seeing that a man is endued with understanding, and hath a hand given him by nature, he cannot complain of his nakedness and condition. Was the excellency of the substance, of which mankind was made, fit and convenient for horns, and such like?

96. Why is wine, put into a vessel of water mingled with salt petre, very cold?

Because salt-petre is presently actu cold, tho' it have power to be hot, and when mingled with water, is colder than the wine. Now a thing which is more cold doth make a thing less cold than it was; and therefore the wine put into such a vessel is cooled the better. I have sometimes answered, that it proceeds of the Antiperistasis, that is, by a repulsion, whereby heat and cold are made strong, and every contrary by its contrary. But salt-petre is not hot actu, but in Potentia; and therefore having power only to be hot, and not being hot indeed, it cannot work by that contrariety; for it is actu cold, as the feeling can judge.

97. Why hath philosophy seemed a wonderful and a divine thing to some?

Because that, as medicine is the perfection of the body, so philosophy is the perfection of the soul, as Themistius saith. Or is it because the body of philosophy doth increase and further us in our duty toward God, and make our zeal more fervent; for those things being perfectly

known which God hath done, they turn mens minds and hearts to praise and admire him; this admiration, faith, hope, and charity, do follow: or, it is because it affords pleasure and delight thro' the certainty and sincerity of it.

98. How come tyrants to hate learned men?

It is by reason of the unlikeliness of manners; for so it hath always been, that wisdom hath been injured by bad manners. Or, do they suspect their fomenting sedition and tumults in the cities where their doctrine comes? Or because they reprehend their faults? For, as Plato saith, poets have great force and skill either to praise or dispraise; and every man, that has any regard to his credit, should take heed how he offends a poet.

The PROBLEMS of ALEXANDER APHRODISEUS.

1. **W**HY are men first hoary on the temples? Because the fore part of the head hath more moisture and phlegm in it than the hinder.

2. Why is only the fore-part of the head bald? Because it is loose and soft; and therefore, seeing the hair wants nourishment by reason of its natural dryness, it easily falls into those parts, it doth not stick as behind, where the head is moist and thick.

3. From what doth baldness proceed? From dryness. Such as have curled hair are soonest bald, and are grey headed very late, by reason

reason of the dryness which consumes the superfluous phlegm ; they are watchful beyond others, because sleep cometh of humidity ; as is plain in children, who are moist and sleepy, and full of excrements. Such as have softer hair, as those with a moist head, are of a contrary disposition, being seldom or never bald ; sometimes baldness happens thro' some distempers, as the gout and others ; and such are soon bald, sleepy, and have much superfluity. The hoary hairs are the whitest, because they follow the colour of phlegm, whence they proceed ; they are sometimes yellow, when the phlegm is mingled with choler.

4. Why are old men full of excrements, and very watchful ?

Because they are cold and weak by nature, have a bad digestion, and so gather many excrements by the pores and open passages of the body ; since they are dry, they are likewise very watchful, by reason their bodies are hard and stiff. Children, notwithstanding the interlacing of the pores and soundness of their bodies, are moist.

5. Why have children, which are moist by nature and full of excrements, no hoary hairs ?

Because they are moist and hot, and phlegm is moist and cold ; and they have the fore-part of the head as it were fleshy and thin, whereby superfluities are voided, and that with age doth grow hard, bony, and thick ; and therefore nature doth afterwards give it seams, by which superfluous vapours should breathe out and evaporate.

6. Why do women and eunuchs grow hoary and grey ?

Women, because they are cold by nature, having little exercise, do gather more superfluities, especially when they cease child-bearing. And eunuchs,

because they yield no seed, but superfluity that should breed it, the which with the blood spreads itself all over the body, and is of the nature of phlegm.

7. But why do they want hair?

Women, because they are cold, and have thick passages in their bodies; for cold doth thicken, and therefore there is no way by which hair should pass. Eunuchs, because they are moist, and above measure full of excrements; and therefore as no hair can grow in such moist places, so neither in dry and stony: whereupon baldness doth ensue.

8. How came eunuchs for the most part bandy-legged?

By reason of their superfluous humidity they have soft and wet bodies, and therefore weak; and, as they cannot bear the burthen of the body, they are wreathed and crooked, as the bulrush doth bend if a weight be put on it; for that which is hard and dry is strong, and can resist, but the soft and moist cannot, as is evident by wood, osiers, and men. Also by baths and drink, men are much weakened, but by a moderate diet dried, and become strong and active. Eunuchs are most like women, weak, given to wine, and phlegmatic; for being cold, they covet to induce the contrary quality, and wine by nature is hot. The Ethiopians, being of a drier nature, have curled hair, and are lean, and strong to work.

9. But why have they a sharp and shrill voice?

Because much humidity, filling up the artery, does strain it, and the breath, having a narrow passage, causes a sharpness in the voice. It is plain they abound with humidity, because they be light; their paps grow great like women, they have swelling eye-lids, and soft whitish hair.

10. For what reason do they sometimes covet women, and love the act of venery?

Because some are not perfectly castrated; some have a hot liver, with large seed-vessels, so imagine the use of carnal copulation. They cannot perform what they desire, because their privities want liveliness; for that spirit which puffs them up, doth always fail; so that the spirit, arising from the seed, is carried thro' its respective passages from those parts that are about the loins; in children those conduits of seed are stopped up.

11. Why, seeing there be three simple uniform humours, do they not breed three simple diseases, but more?

There is double in every one; continual, or whole, and broken; for the difference of diseases does not proceed of the humours only, but also of the places; for a hot thing and sharp humour breed a sharp and hot fever; a cold and thick humour a long and dull one; so of wood, that which is hot and dry (as bays, olive-trees, &c.) causeth a great flame, and is quickly consumed, but green or wet wood makes a small smoaky fire, and is long in burning.

Again, if the place be large and spacious, it sooner (and that greatly) enflames the humours, because when heaped together, being full rotten, it is put on fire. But if the place be narrow and small, seeing it cannot contain all the humour but in piece-meal, and so cannot ripen all together, it will stir up a small fever, but such an one as shall burn long. Put then the nature of the humour unto the place, so shall thou find the difference of agues, which arise of the corruption of the humours. If yellow choler do putrefy in great receptacles,

tacles, as the veins and arteries, seeing it is hot, it doth kindle a most sharp, hot, and short ague, which is called a burning or heat; but, if cold phlegm do putrefy in small veins and arteries which are about the flesh, it causes a long and languishing ague, which they call a *quotidian*. And if yellow choler corrupt in small receptacles, it causeth a small or short ague, but yet somewhat longer than a heat, which we call a tertian or short ague; but if phlegm do putrefy in great places it will cause a shorter ague than a *quotidian*; and likewise black choler, if it putrefy in great veins, because it is burnt almost at once, causeth a short ague; if in small, it breeds a long quartan; for there doth concur a cold and thick humour not fit for alteration, and a narrow place, which will not suffer the melancholy and anger to be consumed at once.

12. Why do some, when they are ashamed, sweat under the arm-pits?

Because the pores are thin in that place: nature, when any thing is worthy of reverence and honour, doth send with the blood into the veins and arteries, and they, being full, do distil; as happens in such as are merry, their body being thin, especially under the arm-pits.

13. Why do such as are afraid wax pale?

Because nature, and that power which hath the care of our body, will suffer nothing done extremely to us; and as we run into any place to screen ourselves from danger, so nature, looking to her safety, conveys herself into the body as much as she can, carrying the blood with her, and that the best too, which is what dyes our skin with a red colour.

84. How came they to tremble also?

Because that virtuous animal (*i. e.* certain spirits which arise about the heart by nature's consent) does

does forsake their sinews which before it kept, and is what keeps the body from trembling; and hence it comes that some are loat in the belly, and unawares make water; for those muscles and sinews which stop the course of excrements, being become weak, give leave for superfluities to pass.

15. How come such as are ashamed to wax red?

Because nature of herself (like a noble virgin, reverencing that which is worthy of honour) draws herself into the secretest part of the body, whereby the blood is moved about, and therefore the skin is dyed white, its colour. Others say, the blood is cast over them by nature, like a veil, as one puts his hand before his face.

16. How comes some to die with fear?

Because the natural power, fleeing above measure with the blood into the inwards parts of the body, choaks and puts out the natural liveliness which is bred near the heart, and therefore brings death. By this rule, when oil is put into the flame of a lamp, it puts it out; and blood, which is in the heart, is compared to the flame of a candle or lamp. Some, for the same reason, have died with grief; as fire, covered with a cover, is put out, so the inward motion of the natural heat is resolved.

17. Why are some overcome and dismayed by drunkenness?

Because much wine suffocates and choaks with its heat our natural and lively virtue. It happens chiefly where natural heat is weak; that which is strong can resist much, and in time overcome and digest the abundance, as a great flame can endure much oil to be poured on it.

18. How come old men to shake and tremble?

Because the nerves and sinews of the body, when they receive not sufficient motion, do not endeavour to bear the burthen of the body: the shaking is because the weight of the body draws part of the body downward; and another power, which is called *animales*, upward: when this is done without intermission; and one after another, it causeth quaking; then cometh bowing and stooping toward the ground, and so, instead of a rafter to uphold the fabric, they get a staff.

19. Why do not pepper and mustard heat the belly if they be swallowed whole; but if they be broken they do?

Those things which have their qualities in power only, and not in action, want external help to bring their virtue and power into action; and therefore, being bruised and made small, and entering into the passages of the body, they do work their effect thro' their inherent heat: the like of other qualities. There are some things that have their qualities in action, as the water ptisan and milk; which are to be drunk presently; they are moist and cold, and want no other external help to cool and moisten, but do work immediately. Likewise the salt and the earth, both virtually and presently, and in the sight, are dry; linseed and bread are dry in imagination and sight, but moist in virtue and act: the sea also, and brine-pickle, and aqua viæ, are moist in imagination and sight, but dry in virtue and action.

20. Why do some see nothing in the night, and see in the day?

Because they have a thick spirit of seeing, and which cannot pierce the air unto the thing which is seen, and which in the night groweth more thick, because it is made cold with the absence of the sun.

Or

Or else, as others say, because that in the day-time it is made fine and attenuated with the pure and hot air, and is thickened in the night. The contrary doth happen in a cat and an owl; they discern nothing in the day, and see very well in the night, for they have a very clear and thin sight, the which when it doth thicken in the night-time, is most fit to receive its object in the day-time; and in a clear light, being exceedingly attenuated and made thin, is resolved and scattered. Whereupon lions, which are almost of the like nature, cannot go in the sun; and if they see fire in the day-time, they flee from it. A man may see the ball of their eyes very bright, and they have the most part of their eyes very clear.

21. Why doth a sudden vehement joy somewhat dismay a man, and astonish him?

Because, when the vital virtue and inward natural heat is immoderately carried to the outward parts, it is cast out and resolved; and therefore such sweat and grow red, because the blood is present. The natural heat or fire, both by reason of its heat and fire, and also because it is out of its place, moves upward, and then, for want of food and nutriment, downward again. And, when one of these movings do perish and fail, the man perisheth and faileth also.

22. Why do such as are in grief, and in love, and in anger, sigh very often?

Because that the mind of such as are grieved is turned into the cause of grief and sorrow, and the mind of such as covet to that which they do covet; and the mind of the angry unto that which causeth the anger. Then the mind, being intent upon that whither she moveth, doth, after a sort, neglect and forget to give motion, virtue and power, unto the

muscles of the breast; therefore the heart doth not receive air by the opening of the breast; and by consequence, neither blowing nor cooling, nor yet casting forth, by shutting, closing, and sighing, superfluities are bred of the aduſtion of blood, whilst it doth fear suffocation: the heart (I say) doth force the mind, and give warning that he would give more motion to the muscles, and cause greater breathing in and out, and that he would take in more store of cold air, and thrust out more excrement, and that by often small breathing he would perform that which one great one doth effect. And therefore the men of old time called the word *suspiration*, sighing, of the straitness of the breast. They sigh long and often, because the mind is always upon that which causeth the passion; nature doth force the soul to send in, by the heart, more motive virtue to the muscles of the breast. It is most evident that we do breathe in and out by the arteries. Under the name of pulse, the opening and shutting, the receiving and casting out breath, is comprehended.

23. Why is a sausage hardly digested?

Because that, thro' its lightness, it doth swim in the belly above the light meat, and doth not conjoin with that meat where concoction is made, but swims at the gizzard, where appetite is, and not digestion. If you cast it into water, out of a man's body, it will not sink, but swim above the water; for, whilst meat is minced in it, it receiveth a light air, which causeth it to swim above light things; and therefore it is limber and flaggy, because it is participant of air.

24. Why do we make hot water before we go into the bath, and after that we have been long in the bath, our urine is cold?

Urine

Urine is of a luke-warm quality, and moderately hot; therefore out of the bath, because our body is cold, the urine we make is, as it were in comparison, hot; yet in the bath, because the body is much hotter than the urine, the urine doth seem cold, tho' it be hot after a sort. The which doth appear by him who goeth into the bath to get heat; if he only go into hot water, it seemeth very hot, but, if already heated to go into it, it doth not seem so hot.

25. How comes it that we find sweet fresh water when we dig near the sea?

Because, in the sea, the water which is thinnest and purest is fresh; that which is thick is salt; the thin water therefore, which runneth thro' the passage of the earth, is hidden in the earth; the which we find, when we dig, is fresh; because that, in the water, it is drawn up into the air, the thick and dried water doth become salt; but in the sea-shores, because the passages be broad and wide, fresh water is found.

26. Why is well-water warm in winter, and cold in summer?

Because every thing doth flee from its contrary as from an enemy, it is manifest that cold is contrary to heat, and doth destroy it; and therefore, in summer, because the heat doth occupy the air, the cold doth flee unto the bowels of the earth, and so causeth the water to become cold. But, in the winter, because the cold hath greater sway in the air than the heat, the heat fleeth to the same place, and so doth heat the water. For it is against the law of nature that contraries should dwell together in the same place and time.

27. How comes it that men of small stature are commonly wiser than the tall.

Because

Because in small men the soul is well joined and compacted together in the whole body; in tall men it is extended in length. And therefore Homer doth describe Ulysses to be short and wise, and Ajax tall and a fool.

28. Why do we cast water in a man's face, when he doth swoon, to make him come to himself again?

Because that, thro' the coldness of the water, the heart may repair to the heart to give strength.

29. Why do many fools beget wise and strong children?

Because fools, when they are in the act of copulation, yield very much unto pleasure, and have their mind drowned in the body; whereby it cometh to pass, that their seed being participant of great virtue, as well reasonable as natural, doth cause such as are begotten to be wiser. But it happens otherwise to such as are wise and learned; for their seed wanteth much natural virtue, and the force of wisdom maketh them to think on some external cares, which weakeneth their attentions in the act of venery.

30. Why doth not the dung of wild beasts stink so much as the excrements of men?

Because they use dry superfluous meats, and have a great exercise; yet, the dung of some beasts is of good savour. But, of all other, the dung of a man doth savour worst, because men do use many moist meats out of season, and more than is needful; also they are less hot than other living creatures, and not so much exercised: and seeing that it is not full digested and evaporated by reason of the abundance, but doth corrupt, therefore it is of bad savour.

31. Why

31. Why do mustard, and such like sharp things, blister and ulcerate the skin, if it be put upon it, and when it is swallowed, doth not ulcerate the belly?

Because they are dissolved with the moisture of the body, and because they are changed and digested before they work; but upon the skin, which is thin, they have more time to work.

32. Why doth barley bran, seeing that it is cold, dissolve phlegm?

Seeing all cold doth make thick, and hinder resolution, truly, I think, not because it doth cool, doth it loose and dissolve, but because it doth cast out, it hath a virtue of dividing and expelling humours. And there are divers such kinds, which work contrary unto themselves, accidentally and by chance, not principally; because they do expel naughty humours, from the veins, and do provoke urine. So flower-de-luces and hyssop are good for the pleurisy, altho' they are hot, as they do cut those humours which breed betwixt the skin, and which gird the side. So the disease, which is called *retentus*, is cured with hot water poured upon it, which is bred of cold humours; it doth heal it, not principally of its own nature, but because it is heated.

33. Why do some men puff and blow when they make water?

Because the bladder, when it is full of water, doth swell and straiten the gut, which is called the right gut, and when it is emptied, a wind, which is in the gut, desireth a passage out.

34. Why do some men gape when they see others gape?

Because the nature of living creatures, and especially of such as want reason, hath a likeness of consent and affections: and therefore, when an ass pisseth, the others do stale likewise.

35. How

35. How comes it that one which is blear-eyed doth infect that which is whole, and yet he which is whole cannot heal the blear-eyed?

Because the eyes are soft and moist, and exposed to infection; health receives an alteration of a small cause, and sickness of a great and vehement; and that which is in a mean is easier changed of that which is vehement, than contrariwise, the vehement and great of the temperate and mean. And, therefore, blearness, being a vehement and great disease, doth easily turn health, which is a temperate and moderate state of the body.

36. Why do money and an apple seem greater if in the water than they are?

Because water doth deceive the sight, and the water about them maketh them seem of one colour. So the sun, the moon, and the planets, when they are seen near unto the point of their rising or falling, seem to be of greater bigness than at other times; for they alter the air about them with their quality.

37. Why, when a man doth give a blow with a staff far off, see we the blow presently, but we hear the sound after, altho' the sound and the blow be together?

Because we have a sharper and quicker sight than hearing, and therefore the sight doth anticipate the strokes, and the hearing, which is grosser, doth hear the sound slower. And, by the same reason, we may resolve the doubt of thunder and lightening: for we see the lightening before we hear the thunder, altho' the thunder be first, or at the least, together with the lightening; and yet the sight, being more subtle than the hearing, doth see the lightening before the air doth hear the thunder.

38. What

38. What is the reason, seeing we are naked on our face, and clothed over all the body, yet we can endure cold better on our face than on our body?

Use is the cause of it.

39. What is the reason that yellow choler, which all a man's life-time is contained in a place called the bladder of choler, doth not eat out the said bladder, seeing it is subject to many alterations; and yet, if it fall into a tooth but a small time which is a body that cannot easily suffer, it will presently eat it out?

Because nature hath so wrought, that it should only remain in that body and not hurt it. The name of nature is a great remedy against grief, as by many examples can be proved. The infant is in the womb of the mother nine months, and giveth no grief of heart unto her; but, if a light wind should breed there, it would presently cause a sharp disease. The rough artery is only a receptacle of wind; but if a crumb should go amiss in it, it causeth either choaking or a vehement cough; which could not be so, if nature had not so prescribed.

40. Why do some men go into a bath thirsty, and come out without thirst, and some, contrariwise, go in not thirsty, and come out thirsty?

Such as are dry do wax moist in the bath, and quench their thirst, for this cometh of dryness; but those which are moist, and not thirsty, if they stay long in hot air, are thirsty, because their moisture is dissolved and spent with sweat.

41. Why do some belch unfavourily after the eating of a radish, and some not?

They whose stomach and belly do not abound in naughty and superfluous humours, tending to phlegm, have a sweet breath; but they, whose stomach doth abound, have an unfavoury breath. A

radish

radish is hot, and doth cut and attenuate the grossness of humours, which it doth cast out by belching : so dirt, which is not stirred, doth not savour at all, but if it be stirred, it yieldeth a strong stench. Those which think that a radish is of a stinking quality of itself, because it doth stink out of the body if it be long kept, without doubt are deceived ; for all men which eat of them, would have unsavoury breath if it were so.

42. Why in every great cold do the fingers and superficial parts of the body wax black and decay ?

Because extreame cold doth drive the natural heat into the body, and so the outward part of the body doth first grow wan, then black, and almost like a corpse. They fail and decay because that nature, being intent on the other parts of the body, doth join unto itself that which is hot, and doth drive away and cast out that which is decayed, as naught. The superficial parts are altered, because they are not very fleshy, nor very hot ; for, in trees, those leaves fall soonest in the winter which are least hot in nature, and therefore are weaker and thinner. Those which say that the natural heat doth presently, in the beginning, flee from the cold, as it were from an adversary, into the internal parts of the body ; and then gather itself again, and strengthen itself, and as it were with a supply help those parts which are altered, and either because it was on a sudden, or because great store of heat doth run back again, and so burn the utmost parts of the body, because, that staying, there is much of it gathered together—those, I say, without doubt, do think amiss.

43. Why are such in great pain as, being very cold, do heat their fingers ends, or uttermost parts of the body ?

Because

Because of the sudden change of quality, much cold doth change into much heat. Whatever is done doth bring grief to nature; and whatsoever suddenly agrees with nature doth delight in nature; for man's nature doth consist much in the manner of this disposition.

44. Why do such as eat pepper, or great morseis of bread, yex?

There is a proportion in them with those things which do outwardly overcharge us, or cause us to have pain. Pepper and choler have a proportion with thorns, but phlegm and bread with a heavy stone. Such as have a stomach not full of superfluities, nor hot and sensible, are quickly bitten with the sharpness of pepper; they do stir the stomach to void and cast out that which grieveth, and so do yex. But such as have a cold stomach and full of phlegm, and feed not so well, they do not yex so soon. The like hath happened unto them which swallow great pieces of bread; the stomach is oppressed with the abundance and greatness of the bread, and nature doth not suffer her parts to be idle when she feeleth any thing that doth hurt her; and therefore pepper, with its biting quality, which hath a proportion of yellow choler or phlegm oppressing within, doth cause yexing.

45. Why do such pains as be in the nails grievously torment us;

Because that the sinews, which are in the fingers, with a peculiar kind of superfluity do breed the nails, as the teeth are in the gums. Therefore when the sensible virtues of the sinews go to the extreme parts, and are there gathered together, like water flowing into a valley, without doubt, the greater the alteration is, the greater the grief is.

46. Why doth a great deal of bread devoured hastily,

hastily, by not staying for breathing, drive away the yex?

Because that, pressing the stomach and driving it into a narrow room, it causeth the meat which is hardned in it to be prest out into the belly; and the stomach being discharged it doth slay the yex.

47. Why do such as yex, give up yexing when they hear of any sorrowful matter?

Because they are intentive upon the sorrowful news which is brought, and therefore neglect to move their breast: and again, seeing we do then hold our breath, and so cause it to grow great in us, it doth slay the yex.

48. Why do pictures, to them which are near them, shew their colours plain, and, to those which stand afar off, shew some hollow, and some bending and hanging?

Because the force of seeing is dissolved and stretched in a long distance, and therefore we cannot see exactly the skill of colours, but do see the white colours bending, and the black hollow; for white doth shine outwardly, and moveth itself unto that which is bright; but black, as being dark, inwardly.

49. Why, if cold water be an enemy to the sinews, is not water a friend, and good; but yet that is also hurtful?

For, if such a thing be hurtful, the contrary is profitable; for contraries cannot work the same way unto the same thing: but in truth heat, as hot in its own nature, is not hurtful to the sinews, but in that it is hot and moist: the sinews, because they are quick of feeling, want much fastening and hanging; for they are dry of their own nature, but the moistness which is contrary doth mollify them, and slacken and putrefy them. And so it is plain,

that

that heat itself is not hurtful by nature : a draught of hot oil is good, because it hath a binding nature.

50. Why, if apples be naught because they are cold and moist, is not water so too, being of the same quality ?

Because water is more subtile than apples, sooner purged, and therefore it doth not hurt so much ; yea, it doth sometimes strengthen the body.

51. What is the reason that some things, which are of hard concoction, and of gross humour, are more easily digested, as beef, than those which are of an easier digestion, and not of so gross humour, as fish ?

Some attribute this unto custom ; some think the cause to be in some secret hidden quality of nature : meats, which are more digestive than is requisite, as being more mutable, are burnt and consumed through the great force of heat ; and those meats which are not apt to digest, as being hard to be changed, seeing they be not much changed, are only digested. So straw, as being apt to be altered with great fire, turneth into ashes presently, but the like is not in the oak, which is orderly burnt.

52. Why are such, as are sick, in pain, pale outwardly ?

Because that nature, as we have said, doth penetrate even unto the heart, together with the blood, and it is the blood which doth heat the superficial parts, and make them thin and clear.

53. Why doth cold wine grow in Ægypt, which is a hot country ?

For the same reason. Again, the cold doth flee to the roots of the vines, and maketh them cold ; for the vines are more apt to receive alteration than other trees.

54. Why doth hot water, cast into well, cause the water to be cold?

Because the cold which is in the well doth resist the heat; and, because it is greater than the heat, it doth prosecute the heat by all means, and doth flow into the hot water very much, and so makes it cold.

55. Why, when a small thing doth fly in our eye, shut we the other when we pull it out?

Because that the spirit of seeing cannot go out by the eye which is shut; but, gathering itself together, goeth with abundance unto the eye which is open, and doth fill it, making it swell outward, and so that is driven out and expelled that is in it.

56. Why do such as are buffeted see fire?

Because the sight, being made thin and slender by the blow, doth wax fiery, and so, going into the air, becomes as it is. The like happens when two stones, or two pieces of iron are knocked together, for the air between them is rarified and made thin, and so becomes fire. The like happens in the clouds.

57. Why doth not the striking two stones together cause fire?

Because some of them yield too much, are too light, and as it were full of holes; for all striking of the air doth make it alike thin; so, through its lightness, it enters every pore, and doth not always fire. The like in wood when struck.

58. Why do such as itch desire hot things?

Because the phlegm, through whose grossness cold and itching do arise, doth numb the flesh.

59. Why are they then also glad of baths?

Because heat disperses the phlegm.

60. Why do the shoulders itch much?

Because they are colder than the fore-parts, and therefore have much phlegm in them; which is the reason

reason old men (being cold) are much troubled with the itch.

61. Why is the coming down a ladder more easy than the going up?

Because, in descending, the weight of the body doth of itself tend downward: in ascending, the strength labours in lifting up the weight of the body; so a stone is easier thrown down than up.

62. Why do children cry when they are first born?

Because nature and sense do, as it were, wander in a strange country, so they come out of a warm soft body into the air; perhaps the light may offend them.

63. Why do bees, emmits, flies, &c. die in oil?

By reason their breathing-hole is very narrow, so oil stops it, and so they die.

64. Why will flesh putrefy in the night under the full moon?

Because then the air is hot and moist, which furthers putrefaction; whence it comes that, if the heat and moisture be small, concoction is wrought of great consuming; if heat prevail, then burning. The moon also hath four dispositions; the middle seems to be moist and in a manner hot, the full hot and dry, the wane, dry and cold, and when she is without light, cold and dry; for she wanteth then the sun-beams.

65. Why are such pale as are in pain and grief?

Because nature, remembering that which vexes her, fleeth with the blood to the inward parts, and so affects the flesh, but it happens less to these than to such as fear.

66. Why are such red as are glad?

Because nature doth meet that which delighteth of her own accord, if it be without, as we do our friends
or

or children: the blood doth follow nature, which dyeth the flesh red. Paleness comes of the contrary.

67. What is the reason that in a dead sleep we often open our eyes and see light?

The force or spirit being gathered together in sleeping, and increased, doth rush out through the dark in great abundance: and being bright itself, doth see like unto the like.

68. Why do such as are ashamed cast down their eyes?

Because the eyes are the glass of the mind; for we see the affections of the mind by the eyes, as grief, anger, shame; because the mind cannot bear what is not worthy of honour, for conscience-sake it causes the muscles of the eyes to tend downwards, as if hiding themselves.

69. How comes the ear to endure all moistness, water excepted?

The reason is plain; water, being cold, is presently carried to the organs of hearing, to which all cold is hurtful.

70. Why, before a great wind, are there as it were some running stars, or lightening, foretelling it, especially in a dry and clear element?

Because that it began to blow before, and yet it appeareth not unto us, because we have gross thick bodies of hard senses, and therefore blowing the upper air, which is more thin and pure, it doth become fire, and so we perceive some of its sparks. When it hath gotten a greater force, it moveth the grosser air, which is about the earth, and so is heard, felt, and perceived.

71. Why cannot some see very great things afar off, yet see things near, though very small?

Truly, I think the force or spirit of seeing is very thin and pure, therefore when distanced, it is dissolved

solved and cannot reach the object; for it doth hardly see things near, because of its thinness and pureness. There are some which discern very small things afar off, and old men too: these have a thick sight, which reaches a great distance, by which it is attenuated, made thin, and fitted to receive things visible; and thus two opposites are dissolved.

72. How come dogs to fall in when they copulate?

By reason the neck of the matrix is very narrow, and the dog's yard doth swell when in it; and the seed cleaving in them, through their dryness, straitens their passage, when moisture acts the contrary.

73. Why are dogs mad only in summer?

They are very dry by nature, and chiefly in summer; wherefore, when their humidity is heated or dried, they are set on fire and become mad, like to frantic men. They foam at the mouth, and that is dry and venomous; which is discovered by their panting, fiery eyes, or open mouth, which they open to take in air to cool them; besides their tail becomes crooked, and falls away. The most dry ones are most raging. Some say, that the dog-star (thro' its influence) makes them grow mad.

74. Why are those less grieved that become blind on a sudden than those by election?

Because the former have their mind turned another way, but the latter have theirs wholly upon the thing which is out; they know what they suffer, therefore endure the greater torment.

75. Why do such as carry great burthens go singing?

As the reasonable soul is delighted with music, and is naturally turned for it, it feels the less weight. So in funerals, where drums, flutes, &c. are used, the mind being intent upon the harmony, the spi-
rits

rits sustain less grief, wherefore comedies and stage-plays were invented formerly to divert the senses.

76. How come Ethiopians for the most part to die of agues? and why are those that are bleary-eyed ulcerated?

The Ethiopians are hot and dry, and that little humour which is in them being exhausted, it happens the other elements are dissolved; the heat goes away for want of food, and cold arises thro' its absence. Drought reigns thro' the consumption of moisture, and for that cause dead carcases are cold and dry. Wherefore Homer says, that in dead bodies two elements flee away, viz. the highest and thinnest, and two remain; there go away fire and air, the water and earth remain, viz. dryness and cold. Some are ulcerated in blearness of their eyes, because the blood is full of choler by the inflammation, which eats the eyes by its acidity.

77. How come dropical people always thirsty?

By reason the moisture is salt and goes not away, but putrefies and dries the mouth of the stomach; and they have small fevers with it. Besides, by how much the belly is puffed up, by so much the more the rest of the body is dried; it is not naturally nourished; so grows feeble; for the food becoming water, it increases the disease.

78. Why do we, in the beginning of a banquet, sit close, and when we become satisfied, take more room, and think ourselves oppressed?

Because in the beginning all have an appetite to the meat, and therefore have an eye to what is on the table, to fall to; but, after they are well satisfied, one bloweth this way, another that, and take no care at all of what is before them; by these means after meat we take more room.

79. How

79. How comes our hair to grow grey; wherever it is, except in the arm-pits?

By reason the place is hot, and thick of arteries, sinews, and veins; it is likewise thin, and therefore always voids the phlegmatic excrements by sweat.

80. Wherefore, if phlegm be cold, thick and clammy, and likewise black choler cold and thick, (but much less than phlegm,) is a quartan ague longer than a quotidian?

Because phlegm, tho' it is cold, and there is much of it, yet is moist; and moistness is soon altered. Black choler is cold and dry, therefore hard to change: they receive therefore, with the likeness of cold, abundance of choler; and hide some contrary quality. Besides phlegm is more agreeable to nature than melancholy; for, when a man's health is impaired thro' hunger, nature turns phlegm into nutriture; so that, when it is a quotidian ague, she turns all the profitable phlegm into nourishment, and that which is unprofitable putrefies, and causes an ague.

81. Seeing there are four humours, which sometimes putrefy, wherefore are there but three agues only, and not four?

Because blood is naturally the nutriment of the body, and when it doth abound, it causeth a repletion only; if it be corrupted, it remains blood no longer; for, being heated, it is turned into yellow phlegm; therefore the other humours abounding, breed diseases, especially about the skin, as ulcers, cancers, two kinds of leprosy, and (when corrupted)agues.

82. What is the reason the external parts of the bodies of lovers are sometimes hot?

Because when they conceive any grief, or choler against their lover, the natural heat parteth away with the blood into the internal parts of the body, and

and so the outward become cold, consequently pale and languid ; but when they perceive their lover angry, then the heat with the blood goes to the skin, and causeth blushing. For this reason painters feign Love to be sometimes sad and quiet, sometimes fleeing or laughing ; as a boy or child, because lust is vehement, but lasts not long. The affection in lawful friends is durable, as fathers towards their children, and wives toward their husbands, but love doth not last ; and it falls out often among such as are unknown to each other. The other disposition or affection is stable or firm, and love is immediately vehement and like a madman. The poets feign love to be a fire-brand, and to have wings, because that the minds of lovers are in suspense, and they are inconstant as birds ; then it is their hearts burn with an incessant and vehement care of what they love. He holds a sword in his right hand, and in his left a quiver with many arrows, because in the beginning he sees and desires at the same time, and as soon as he desires, the lover sends beams of the eye toward what he loves ; and those beams are like arrows. As air lights a fire, so custom kindles love. He is naked, because the fire happens without meat ; for no man loves another whom he knows not. And therefore carvers do sometimes carve kings and gods naked for honour's sake, thereby to shew they have no hidden vice lurking in their breast, but their thoughts are open and sincere. Love hath Venus for his mother, that is, sensuality and lust ; and by the image of Venus they feign unlawful desire. Love is said to have been in love with Erynnis, a fury of hell, because many have loved wickedly, and been enthralled to wicked inclinations ; as I have shewn

in my book of the Allegories, which I wrote of their feigned stories.

83. Why do some die in a plague and some not?

This proceeds of their disposition of body; for if a man have a body full of evil humours, the air which is corrupted doth enter into and corrupt that little good humour which is left in him; and so, all the humours being corrupted, he must needs perish. But if a man have not many superfluities, and doth abound with good humours, he is not at all, or not much, affected with the plague. That the disposition of the body is the cause of the effect doth appear by the example of external things. The oak is not easily subject to alteration, nor is it easily set on fire: reeds and rushes are much more apt to receive fire, and straw more than they. But, if you take wet straw, and green reeds, and very dry oak powdered over with brimstone, you make that fit to burn which is not fit. By this example you may resolve another question. How comes it to pass that weariness doth rather breed a quotidian ague, than that which breeds of putrefaction, or that which is called habitual? for we say, that this proceeds from the disposition of the body, for he had not any superfluous natural spirits or humours. All things, which are sound and solid, are dry; and the cause is the same, why the heat of the sun doth provoke sleep in some, and in others not; for he, in whom there is much phlegm, which being dispersed doth moisten the head, is very sleepy; but such as have dry heads, are kept more awake; because they are made more dry.

84. Why doth the sun make a man black, and make dirt white; and make wax soft, and dirt hard?

By

By reason of the disposition of the substance that doth suffer. All humours, phlegm excepted, when they are heated above measure, do seem black about the skin; but dirt, being full of salt-petre, or salt liquor, when the sun hath consumed its dregs and filth, doth become white again; when the sun hath drawn and stirred up the humidity of the wax, it is softened; but, in dirt, the sun doth consume the humidity, which is very much, and so doth dry it, and make it hard.

85. Why do such as are sick of the jaundice go to sleep, and why is their excrement white?

Because the yellow choler is spread over all their bodies, as their eyes and their skin do shew; for it doth not flow into the inward parts, as by nature it should, and for that reason their excrements are not coloured, nor are they provoked to stool with its sharpness, which in the guts it should do. And therefore physick, imitating nature, as all other arts do, when the patient is in danger, doth help the part affected.

86. Why have they such a black skin, for a time, who have a continual ague, after the time of judgement which the physicians call Crisis?

That doth happen thro' continual yellow choler, the which, being burnt and adust by the rigour of the disease, is turned into black choler. And so, in the time of judgement, being driven and repulsed by nature to the skin, it doth dye it. The skin is also white in leprosy; that colour is hardly dissolved by reason of the thickness.

87. Why doth black choler, coming into the paps, or to the flank, work a corrosion, or gnawing, or wasting, but in those that are melancholy it doth not work the like, although it fly into their brain?

Because

Because there are many great veins in the paps, by reason of ingendering of milk, and therefore store of that humour doth run thither. And likewise to the shank, because it goeth downward; but, in the brain, because it is above, and also because it hath very small veins, small store of choler doth ascend, and which hath only power and force to prick, and not to gnaw and eat. Moreover the brain is cold and moist, whereby it is, after sort, contrary to the disposition of black choler, which doth mortify it. That, therefore, which is properly called black choler, doth breed an eating and gnawing canker in the paps; in the shank a bile, or sore, hard to be cured. In the brain it doth breed a mad, fierce, melancholy; but that which is not properly black choler, but melancholy humour, causeth a swelling only, which is like a canker, but doth not gnaw and eat, and doth also breed a quiet and peaceable melancholy.

88. Why do such vessels, as have a narrow strait mouth, when they are filled with water, make a certain noise proper unto themselves?

Because that, when such a vessel is without water, it is filled with air, which is a most thin body; and, when the water is on a sudden poured into it, with its heat it doth follow and beat out the air, which is thin, and excludes it utterly; for they cannot both stay in the glass, or vessel, till it be full. For the philosopher doth shew that two bodies cannot at one time possess and occupy the same place. And therefore, when the air is on a sudden thrust upward through straits, a sound or noise is made of necessity, and that not one but many, for then it is, as it were, affixed betwixt both, for the water doth press down the air, and the air listeth up the water; and, although that be done successively, yet there is oftentimes a noise.

89. What is the reason that when we put our finger on the mouth of a watering-pot, the water will not run out of the bottom, and, the finger being taken away, it runneth presently?

Because that when the finger is taken away from the mouth of the pot, the air entering in doth thrust down the water, which of its own nature doth go downward,
E and

and so goeth out at the bottom. And this is the reason for all mechanical engines and instruments made by air and water, as clocks and hour-glasses made by water.

90. Why doth wine and water, given out of season to the sick of an ague, cause a great distemperature of the brain? for those two are contrary; for the water is cold and the wine is hot.

I say then, that the wine, being apt to ascend, doth burn the brain, at the same time that it is disturbed and distempered with the ague. And we see also many which are in health, if they use much wine, to be scarcely well in their wits. But water doth stop the passages of the body by which the spirits (which are the instruments of the soul) are dissolved, and so causes them to become thick and gross, and more corrupt and putrefied, which breeds the ague. And oftentimes water being overcome by the ague, becometh its nourishment as we see in a smith's forge, where a little water doth kindle the fire and make it burn more.

91. Why have women and children, and gelded men shrill and loud voices?

Because that through the abundance of humidity, their artery is not stretched wide; and therefore as a small flute or pipe giveth a small slender sound, so of the artery in them that are strait and narrow; for it is the property of heat to make wide and loosen, but women and eunuchs are cold.

92. Why are children stricken with a planet in summer time?

They are sick of a weak and lingering ague, and their eyes sink hollow in their head, and they become weak and feeble, and sleep very little: and some of them have a flux, because children are tender, and do easily suffer and have great store of phlegm in the head, as we have said: and therefore, the phlegm, being over-much heated with great heats, and also putrefied, doth inflame the ague, whereupon the gristles of the brain are set on fire, and therefore they sleep little; and that fire, descending by the arteries of the heart, and setting on fire the lively spirits, doth kindle an ague without putrefaction. And seeing that much choler arises of an

ague, whereby it falleth out that the choler gnaweth and eateth the belly, it is plain that the cause of that alteration is in the brain, because that cooling medicines are applied unto the head, and such as are good to quench that fire. And some of ripe years are sick of the same disease, that is, such as have phlegm and choler heaped up in their head, which do putrefy by the very breathing thereof, and after a manner, by the fiery air the spirits are set on fire.

93. Why are round ulcers hard to be cured?

Because they are bred of a sharp choler, which eats and gnaws; and, because it doth run dropping and gnawing, it makes a round ulcer, for which reason it requires drying medicines, as physicians assert. Natural philosophers say, it comes to pass, because there is the beginning where the mischievous imposthume doth begin; for in a circle there is neither beginning nor end. When they are burned by the physicians they assume another kind of shape.

94. Why is honey swee to men in general, but seemeth bitter to such as have the jaundice?

Because they have much bitter choler all over their bodies, which abounds on the tongue; whence it happens, when they eat honey, the humours are stirred: and the taste itself, when it hath found the bitterness of choler, causes an imagination that the honey is bitter.

95. Why have very angry men fiery eyes?

Because the blood about the heart is fervent, and the spirit hot, and so (being very subtle and pure) is carried upward, and by the eyes (which are clean) they shine, and have bloody vapours that ascend with them, which make the face red; Homer, not being ignorant of this, says, "And his eyes were like a burning flame."

96. Why doth water cast upon serpents cause them to flee?

Because they are cold and dry by nature, having but little blood, and therefore flee from excessive coldness. And that they be of this quality is plain, because they seek for dens and secret places in the earth, as being warm: at sun set they shun the air, as being cold. And again in summer, because the bowels of the earth are cold, they find out the warmest places.

97. Why doth an egg break if it be roasted, and not if boiled?

The reason is, when moisture comes near the fire it heats too much, and so breeds much wind, which, being pent up in little room, forceth its way out, and so breaks the shell.

The like happens in rubs or earthen vessels, when new wine is put in them. And too much phlegm breaks the shell of an egg in roasting; the which doth happen in earthen pots too much heated; wherefore the common people wet an egg when they intend to roast it. Hot water, through its softness, doth separate the humidity by little and little, and so dissolves it through the thinness and passages that are in the shells.

98. Why do men, in the act of carnal copulation, in a manner wink, and find a like alteration in all the other senses?

Because they, being overcome with the effect of that pleasure, do comprehend it the better winking as it were with their eyes. They are not lifted, nor do they carry the wind abroad into the air with the senses, whereby they would less discern those corporal affections.

99. Why have some medicines of one kind contrary force, as experience doth teach? Mastic doth expel, dissolve, and also knit; vinegar both cools and heats.

Because there are some small invisible bodies of them, not by confusion, but by interposition; as sand moistened doth clog together and seem to be but one body, though indeed there are many small bodies in sand. Since this is so, it is not absurd that contrary qualities and virtues should be hidden in mastic, as nature hath given the law to these bodies.

100. Why do our privities swell when we hurt one of our toes?

Nature, warding for those things which belong to the body, hastes to assist the part grieved: and, because she hath the most profitable and nourishing of all the humours, it is requisite, when she doth descend to the toe with the blood, that those veins be filled which are about the privity members, which are like little round

kernels

ternels. Therefore immoderate constipation doth cause inflammation and standing up

101. Why doth not nature give birds a bladder, or a receptacle for urine?

Because they did want much moisture to give the matter for feathers to grow, and that they do consume with the exercise of flying; neither do they piss at all; and, when they drink, they void very much dung.

102. Why have children gravel breeding in their bladder, and old men in their kidneys and reins of the kidneys?

Because children have strait passages in the kidneys, and an earthy thick humour is thrust with violence by the urine, from the fashion of the moon, even to the bladder, which hath wide conduits or passages that give room for the urine and humour, whereof gravel is ingendered, to wax thick and seat itself, as the custom of it is. In old men it is the reverse, as they have wide passages of the reins, back, and kidneys, that the urine may pass away, and the earthy humour congeal and sink down; the colour of the gravel shews the humour whereof the stone comes.

103. Why, if the stone do congeal and wax hard through heat, (children are hot; and by the same reason it is done in old men; for there is not so much cold to be granted as there is in ice or snow, through which extreme cold the kidneys would perish,) use we not contrary things to dissolve coldness, but light things, as parsley, fenel, and such like?

They say then it falleth out that, by exustion and scorching, the stones do crumble into sand, as in earthen vessels, which, when they are over-heated or roasted, become sand. And by these means it happens that small stones are voided together with sand in making water. Sometimes cold drinks thrust out the stone, the kidneys being stretched, and cast it out by a greater task, and ease the belly of its burden. Besides it often happens that an immoderate heat of the kidneys or reins of the back (through which the stone doth grow) is quenched with coldness.

104. Why is the curing an ulcer or bile in the kidneys or bladder very hard?

Because the urine, being sharp, doth ulcerate the wound, which good and fit medicaments cover and skin. Ulcers are harder to cure in the bladder than in the kidneys, because urine stays in the former, but runs away from the latter.

105. What is the reason that in bathing-vessels the hot water, when it is stirred, seems the hotter to us, almost burning our bodies?

Because, when we enter those sorts of baths, the water itself doth suffer; that is, when the water heats our bodies, it is made colder by us. We have learnt, that whatever works in generation of corruption, the same (without all doubt) doth suffer: the water then, being in some sort cooled, doth not heat alike, and we being accustomed to it, do not feel the heat as we did in the beginning, because it is diminished. If by stirring the water more heat is added, which neither bath yet wrought nor suffered any thing of the body which is in it, that will seem very hot and scalding; in regard that it suffers by something, and so, by degrees, loses its heat, as the first did.

106. How is it, if whatsoever be moved is the better for it, especially in a hot air and place, yet, when the air is beaten and stirred, it doth seem colder to us, and especially in summer, when the heat of the sun is most violent?

This seems a contradiction to the other, for hot water did seem hotter to us by moving, and here the hot air seems colder by moving. Therefore it is a common thing for what is moist and principal in any thing, either in quantity or quality, to overcome and change that which is less and weaker; and that which is strong doth somewhat suffer again in doing. Wherefore the hot water, when it is very hot, sticking to the hot body, cools, and does not retain the same quality. The air then, which doth compass us about, being hot in summer, like the water compassing our bodies, is somewhat heated by us, who are hot through the season; it heats us as linen garments do, the which being first cold, and then by our bodies made hot, heat us again:

gain: when we do then stir the air, that air which was before heated by us is driven away, and another not yet heated succeeds, and seems cold to us.

107. Why do those sores which breed in the ball of the eye seem white when they have left growing, and are cold, and others which grow out of the ball do not seem so?

Because through the ball of the eye the sight proceedeth, the which is bright and clear: therefore, in the white of the eye, when the wound doth make thick that part of the covering which is like a horn, the spirit of the sight cannot issue out; hence it comes to pass (much of it being got together) it makes the wound light and clear, shewing it white and, because of the thickness of the sight the spirit cannot go out, it causes blindness.

108. Why do chaff and straw keep water hot, and snow cold, which are seemingly contraries?

Because the nature of chaff want a manifest quality, and is said of some to be without quality; seeing, therefore, that of their own nature they can easily be mingled, and consumed with that which they are annexed unto, they easily also take the same nature unto them, and therefore, being put unto hot things, they are easily hot, and so heat again, and keep hot; and, contrarily, being made cold of the snow, and making the snow cold, do keep in its coldness. So wax and oil will easily be consumed, and made one with another thing, and are also without quality, and do help the quality of that which is mingled with them, as being made one with them.

109. Why do the stars and heaven seem clearest and bright in the winter times?

Because the air, either that which doth encompass us or that which is highest is made thin, and

purged with winds and showers of rain, and by these means our sight doth see both fathes and clearer. The like is manifestly seen in running rivers: for such things as are in them are far better seen than in the thick standing puddle-water, where either nothing is seen or else confusedly.

110. Why have we oftentimes a pain in making water?

Because that sharp cholet, issuing out and pricking the bladder of urine, doth provoke and stir up the whole body to ease the part offended, and to expel the humour moderately. This doth happen most of all unto children, because they have most excrements, by reason of their often filling.

111. Wherefore are griefs greater in the night than by day?

Because the mind, being then idle and at rest with itself, is neither busied with the sight nor hearing, nor occupied with any other sense, and nothing at all, nor is urged to any external action, and thereupon is much more touched with the feeling of any trouble or grief. It is very plain that the mind doth less feel the grief of the body when it is drawn abroad by external work, seeing that, in sickness and other like accidents, the company or familiarity of friends, and communication, and tales-telling, do make their troubles and griefs more light and tolerable. Men have marked, that nature doth least work by day, in digesting of meats, in altering of humours, in making of blood, in growing, and such like operations; but the mind is then most occupied in its actions, as in the five senses, the motion of the parts of the body, in the imagination, in thought, in memory; and contrarily in the night, when nature worketh most, and the mind least.

112. Why

112. Why are not children, especially infants, so easily shaken and put out of joint as men?

By reason of their softness, and yielding to the earth, they do dissolve its hardness, that it can work no farther; men therefore having a hard body, because they do resist the hardness of the earth or stone, do increase the vehemence of the blow, and force the stones to work against themselves, as being hard themselves. And for the same reason a sponge yielding is not broken; but glass, an earthen pot, or any other such hard body, is broken with a fall. And by this also we learn why a vehement blast of wind doth overthrow an oak and not a reed, because that the oak, being hard, and strong, and great, doth resist the wind, and so makes its force more strong; but the reed, being light, and soft, and small, yielding hither and thither to the wind, doth break its force. So a wrestler, striving against his companion, doth increase his force, in yielding sometimes and bowing with him, which doth sooner break his vehemence.

113. Why do infants, hearing their nurses sing, cease their crying, and sleep presently after?

Because that the substance of music, as being a science, (and all other arts,) is ingrafted naturally in the mind, as the heat is in the fire. Plato doth say, our minds do remember sciences, and do not learn them. And therefore the mind hearing such song, in that it doth remember, causeth the infant to be quiet; and in that he taketh pleasure, it doth draw on sleep. For, not being infected with the company of the body, he perceives those sciences very plainly, and, being somewhat drowned in the body, falleth into some oblivion of them.

114. Why do nurses rock and move their children when they would draw them to sleep?

To the end that the humours, being scattered by moving, may move the brains; but those of more years cannot endure this.

115. Why do some drunkards see double?

Because the muscles of the sight being more or less filled, and by the same means weak and feeble, do draw and wrest one eye upward and the other downward, and by that means the beams do not look that way at once, but toward divers places and bodies, and therefore each of the eyes, using a private office and duty of seeing, doth cause a double sight.

116. Why are boys apt to change their voices about fourteen years of age?

Because that then nature doth cause a great and sudden change of age: experience proveth this to be true, for, at that time, we may see that womens paps do grow, great, to hold and gather milk, and also those places that are about the hips, in which the young fruit should remain. Likewise mens breasts and shoulders, which then bear great and heavy burthens. Also their frones, in which their seed may increate and abide, and his privy member, to set out the seed with ease. Farther, all the whole body is made bigger and dilated, as the alteration and change of every part do testify, and the harshness of the voice and hoarseness; for the rough artery or wind-pipe being made wide in the beginning, and the exterior and outward part within unequal to the throat, the air, going out at the rough unequal and uneven pipe, doth become unequal and sharp, and, after a sort, hoarse, like unto the voice of a goat, wherefore it has its name, bronchus. The same doth happen to them into whose rough artery any distillation doth flow: it happens, by reason of the dropping humidity, that a light small skin, filled
unequally,

unequally, causes the uneven going forth of the spirit and air. Understand that the windpipe of goats is such by reason of the abundance of humidity. The like doth happen unto oil to whom nature hath given a rough artery, as unto cranes. After the age of fourteen they leave off that voice, because the artery is made wider, and reacheth its natural evenness and quality.

117. Why doth oil, being drunk, cause one to vomit, and especially yellow choler?

Because that, seeing it is light, and ascendeth upward, it provoketh the nutriment in the stomach, and lifteth it up, and so, the stomach being grieved, summoneth the ejective virtue to vomit, and especially choler, because that is light, and consisteth of subtile parts, and therefore it is the sooner carried upward; for when it is mingled with any moist thing it runneth into the highest room.

118. Why doth not oil mingle with moist things?

Because that, being pliant, soft, and constipate, in itself, it cannot be divided into parts, and so cannot be mingled; neither, if it be put on the earth, can it enter into it.

119. Why are water and oil frozen in cold weather, and wine and vinegar are not?

Because that oil, being without all quality, and fit to be compounded with any thing, is cold quickly, and so extremely that it is most cold. Water, being cold of nature, doth easily freeze when it is made colder than its own nature. Wine, being hot, and of subtile parts, is not so soon cold; but vinegar, being of most subtile parts, suffereth no freezing.

120. Why do contrary things in quality bring forth the same effects?

That which is moist is hardened and bound alike of heat and of cold. Snow and liquid do freeze with

cold ; a plaister, and gravel in the bladder, are made hot with heat. That is so indeed, but by two diverse actions. The heat doth consume and eat the abundance of moisture, but the cold, stopping and shutting with its over-much thickness, doth wring out the filthy humidity, like as the sponge, wrung with the hand, doth cast out the water which it hath in the pores or small passages.

121. Why doth a shaking or quivering seize us oftentimes when any fearful matter doth chance, as a great noise or a crack made, the sudden downfal of water or a great tree ?

Because that, oftentimes, the humours being digested and consumed with time, and made thin and weak, all the heat, vehemently, suddenly, and sharply, fleeing into the inward parts of the body, consumeth the humours which cause the disease. So treacle hath its effect, and many such like, which are hot and dry, when they are taken after concoction.

122. Why do such fall as do run round, if they be not used to do it ?

Because they do disturb the animal spirits which are in the brain, and toss them up and down together with the humidities ; they then are made less apt and fit to receive the sensible and motive power, and do not suffer any action to go to the muscles and sinews ; whereby it falleth out, that the weight of the body, as not being borne up and supported by the soul, is thrown on the earth ; and for the same cause they seek darkness, because the spirit of seeing is disturbed and troubled, and cannot work like the other senses. But this doth not happen unto such as are accustomed to run moderately ; and, by little and little, custom doth breed this ; for the soul and nature are not strangers the one to the other, but in time are as it were reconciled ; for that, which is done by little and little, and without intermission,

is hidden from the same, and, after that it hath often escaped, falleth not, as a strange thing to nature, who was wont to receive it.

123. Why do steel glasses shine so clearly?

Because they are lined in the inside with white lead, whose nature is shining, the which, being put to the glass which is also shining, doth shine much more, and casting its beams through the passages of the glass, doth double that which is in the superficial parts of the glass and without the body of the glass, and by that means the glass is very shining and clear.

124. Why do we see ourselves in glasses and clear water?

Because the quality of the sight, passing into the bright bodies by reflection, doth return again, by the beam of the eyes, to the image of him who looked on it. That qualities do go forth and pass from the face, and is not absurd, they do shew, who remain near unto trees, because they are wont to look green; for the green quality of green leaves passeth to the face of itself, likewise going unto the running water doth make it shew green.

125. Why do hard dens, hollow and high places, send back the likeness and sound of the voice?

Because that such places also, by reflection, do return back the image of a sound; for the voice doth beat the air, and the air the place, which the more it is beaten, the more it doth bear, and therefore doth cause the more vehement sound of the voice: moist places, and as it were soft, yielding to the stroke and dissolving it, give no sound again; for, according unto the quality and quantity of the stroke, the quality and quantity of the voice is given, which is called an echo. Some do idly fable, that she is a goddess: some say that Pan was in love with her, which without doubt is false. He was some wise

man who did first desire to search out the cause of that voice, and, as they which love and cannot enjoy their love, are grieved, so in like manner, was he very sorry until he found out the solution of that cause: As Endymion also, who first found out the course of the moon, watching at night and observing her course and searching her motion, did sleep in the day-time; and therefore they do fable that he was beloved of her, and that she came to him when he was asleep, because she did give to the philosopher the solution of the course of herself. They say also, that he was a shepherd, because that in the desert and high places he did mark the course of the moon. And they give him also the pipe, because that the high places are blown with winds, or else because he sought out the consonancy of figures. Prometheus also, being a wise man, sought the cause of the star, which is called, The Eagle in the Firmament, its nature and place; and when he was, as it were, wasted with the desire of learning, then at the last he rested, when Hercules did resolve unto him all doubts with his wisdom.

126. What is the reason that, if you cast a stone into a standing water that is on the utmost parts of the earth, it makes many circles, and not if the water be deep in the earth?

Because that the stone, with the vehemence of the cast, doth pursue and follow the water from every part of it, until the stone come to the bottom; but, if there be a very great vehemence in the throw, the circle is the greater; the stone, going down unto the earth, causeth many circles. For, first of all, it doth drive the overmost and superficial parts of the water into many parts, and so, going down always to the bottom, again dividing the water, it maketh another circle, and this is done successively until the stone resteth; and, because the vehemence of the stone

stone is slackened still as it goes down, of necessity the last circle is less than the first, because that, with the stone, and also with the body, the water is divided.

127. Why do some think that laughter proceeds from the spleen, affirming that it is not like that they laugh as much, whose spleen is corrupted, as they whose spleen is sound, but say that such are very sad?

Truly, I think that the cause of laughter is accidental and not properly the spleen; for, if it be sound and perfect, it doth draw from the liver melancholy humours whereof it proceedeth; that, when the pure blood, without any dregs, doth go both thro' the whole body and also in the brain, it doth delight both nature and mind, and doth make men merry, like unto wine, and bringeth them to a quietness and tranquility, and so of that laughter is moved.

128. Why do not mules bring forth young ones?

Because they proceed of a diverse kind of beasts, and so then, the mixtion of seed differing of quality and quantity, begetting a certain other thing beside that which is first, doth mar and abolish the nature of those things which first were. As the mingling of white and black, abolishing the colour of excrements, breedeth another colour which is dark and dun, which is none at all of the extremes. Therefore the ingendering quality is abolished, and the aptness of receiving form.

129. Why are such, as are deaf by nature, dumb?

Because they cannot speak and express that which they never heard; some physicians do say, that there is one knitting and uniting of sinews belonging to the like disposition. But such as are dumb by an accident are not deaf at all, for then there ariseth a local passion.

130. Why are some stiff after meat, who are not fasting?

Because

Because they abound with choler, and so do heap up a four sharp humour. Therefore the parts of the body, being nourished after meat, drive away from them the choler, and so that stiffness doth arise, that is, choler gnawing and biting those parts and stirring them up to pursue them.

131. Why do not swine cry when they are carried with their snouts downwards?

Because that, above all other beasts, they bend more than others to the earth. They delight in filth, and that they seek, and therefore, in the sudden change of their face, they are as it were strangers, and, being amazed with so much light, do keep that silence; some say the wind-pipe doth close together by reason of the straitness of it.

132. Why do swine delight with dirt?

As the physicians do say, they are naturally delighted with it because they have a great liver, in which desire is, as Aristotle saith; the wideness of his snout is the cause, for he hath smelling which doth dissolve itself, and as it were strive with stench.

133. Why doth itching arise when an ulcer doth wax whole and phlegm cease?

Because the part, which is healed and made sound, doth pursue the relic of the humours which remain there against nature, and which were the cause of the bile: and so, going out thro' the skin and dissolving itself, doth originally cause the itch.

134. Why are those diseases and accidents longest and most grievous, which do molest one eye and not both?

For two reasons; first, because a running fluxion is heaped up at one eye only; for whatsoever is divided into many is weaker than when intire, and of a less force. Secondly, because, when the whole eye doth make any motion, it often obliges the ailing eye to move too, and the help for any diseased part consists in quietude

135. How

135. How comes a man to sneeze oftner, and more vehemently than a beast?

Because he uses more meats and drinks, and of more different sorts, and that more than is requisite; the which when he cannot digest as he would, he doth gather together much air and spirit, by reason of much humidity, the spirits being then very subtile, ascending into the head, which often forces a man to void it, and so provokes sneezing. The noise caused thereby proceeds from a vehement spirit or breath passing thro' the conduits of the nostrils, as belching does by the stomach, or farting by the fundament, the voice by the throat, and a sound by the ears.

136. How come the hair and nails of dead people to grow?

Because, as the flesh rots, withers and falls away, that which was hidden about the root of the hair doth now appear, and causes an imagination that the hair doth grow; some say it grows indeed, because the dead carcases are dissolved in the beginning to many excrements and superfluities, by reason of the putrefaction which comes to them. These going out at the uppermost parts of the body by some passages, do increase the growth of the hair.

137. Why have children, as well as grown persons, white spots in the nails of their fingers, rather than in their feet?

Because they are bred of phlegm, and children abound in phlegm more than grown persons, as being fleshy and great eaters. And the feet, by reason of walking and motion, hath divers superfluities more than the hands, and therefore those spots do not appear in the nails of the feet.

138. Why does not the hair of the feet presently grow grey?

For the same reason; because that through great

motion they disperse and dissolve the superfluous phlegm that breeds greyness. The hair of the secrets does grow grey very late, because of the heat of that place, and because that in carnal copulation it does dissolve the phlegm also.

139. Why do many beasts wag their tails when they see their friends, and a lion and a bull beat their sides when they are angry?

Because they have the marrow of their backs reaching to their tail, which hath the force of motion in it; the imagination acknowledging that which is known to them, as it were with the hand, (as happens in men,) doth force them to move their tail. This doth manifestly shew some secret force to be within them, which doth acknowledge that which they ought. In the anger of lions and bulls, nature doth consent to the mind, and causeth it to be greatly moved, as men do sometimes when they are angry, beating their hands on other parts; when the mind cannot be revenged on that which doth hurt, it presently seeks out some other solace, and cures the malady with a stroke or blow.

140. Why, if you put hot burnt barley upon a horse's fore, is the hair which grows upon the fore not white, but like the other hair?

Because it hath the force of expelling, and doth wipe away and dissolve the excrements of phlegm, as likewise all unprofitable matter that is gathered together thro' the weakness of the parts or crudity of the fore.

141. Why doth hair never grow on an ulcer, or a bile?

The reason is, a man hath a thick skin as is seen by the thickness of the hair; and since the scar is thicker than the skin itself, it stops the passages from whence the hair should grow. Horses have thinner skins, as is plain by the thick hair, therefore

fore all passages are not stop't in their wounds and sores; and, after the excrements which were gathered together have broke a passage thro' those small pores, the hair doth grow.

142. What is the reason that such as are bitten with a snake, if they are thirsty, quench it by drinking of treacle, which is hot and dry?

I say then it doth not quench thirst solely by its own quality, but by some mutual sympathy and consent, and natural reason. It is a kind of counter-poison, and a preservative too, being composed of divers sorts of herbs that have some kind of agreement with all the parts of the body; as dictamnium and ginger have a proportionable conservative of the heart, liverwort with the liver, stone-wort with the spleen, parsley with the mouth of the belly, hyssop with the lungs, elicampne with the reins of the back, rue with the neck, bitterwort with the brain, and filer montanum with the bladder. Every one of these, drawn as it were with the sweetness of honey, doth draw that which is best for its safety; among all of these the blood of some viper is mingled, which hath a certain natural disaffection, a contrary of all natural qualities, against every venomous beast and corruptible creature. These being distributed into every part, they suffer nothing to work that effect which doth threaten corruption, for they do resist, like lawful soldiers, who have taken arms for the defence of their country.

143. Why is fortune painted with a double forehead, one side bald and the other hairy?

The baldness signifies adversity, and hairiness prosperity, which we enjoy when it pleases her.

144. Why have some commended flattery?

Because flattery setteth forth before our eyes what we ought to be, tho' not that we are.

145. Wherefore should virtue be painted girded?

To shew that virtuous men should not be slothful but diligent, and always in action.

146. Why did the ancients say it was better to fall into the hands of a raven than a flatterer?

Because ravens do not eat us till we be dead, but flatterers devour us alive.

147. Why have choleric men beards before others?

Because they are hot, and their pores are large and wide.

148. How comes it that such as have the hickup do ease themselves by holding their breath?

The breath retained doth heat the interior parts of the body, and the hickup proceeds from nothing but cold.

149. How comes it that old men remember well that which they have seen and done in their youth, and forget such things as they see and do in their age?

Things learnt in youth have taken root and habitude in the person, but those learnt in age are forgotten, because the senses are weakened in them.

150. What kind of covetousness is best?

That of time, when it is employed as it ought to be.

151. Why is our life compared to a stage-play?

Because the dishonest do occupy the place of the honest, and the worst sort the room of the good.

152. Why do dolphins, when they appear above water, denote some storm or tempest approaching?

Because that, at the beginning of the tempest, there do arise from the bottom of the sea certain hot exhalations and vapours, which heat the dolphins, causing them to rise up and seek for cold.

153. How come things more quiet in the night than in the day?

The

The motion of the air, and the coldness of the night are the cause thereof, which coldness continues and hinders the motions.

154. How come the Romans to call Fabius Maximus the target of the people, and Marcellus the sword?

Because the one adapted himself to the service of the common-wealth, and the other was very eager to revenge the injuries of his country; and yet they were in the senate joined together, because the gravity of the one, would moderate the courage and boldness of the other.

155. Why does the shining of the moon hurt the head?

Because it moves the humours of the brain, and cannot afterwards resolve them.

156. If water doth not nourish, why do men drink it?

Water causes the nutriment to spread thro' the body.

157. Why is sneezing good?

It purgeth the brain, as the milk is purged by the cough.

158. What is the seat of the affections of the body?

Joy dwelleth in the spleen, anger in the gall, fear in the heart, and litchery in the liver.

159. Why is hot water lighter than cold?

Because boiling water hath less ventosity, and is more light and subtle, the earthy and heavy substance being separated from it.

160. How come marsh and pond water evil?

By reason they are phlegmatic, and do corrupt in summer-time; the fineness of the water is turned into vapours, and the earthiness doth remain.

161. Why are studious and learned men soonest bald?

It proceeds from a weakness of the spirits, or because want of digestion causes phlegm to abound in them.

161. Why doth too much watching make the brain feeble?

Because it increases choler, which dries and extenuates the body.

162. How come steel glasses to be better for the sight than others?

Steel is hard, and doth present unto vs more substantially the air that receiveth the light.

164. How doth love shew its greatest force? by making the fool to become wise, or the wise become a fool?

In attributing wisdom to him that hath it not; for it is harder to build than to pull down, and ordinary love and folly are but an alteration of the mind.

165. How comes too much labour bad for the sight?

Because it dries the blood too much.

166. Why is goat's milk counted best for the stomach?

Because it is thick and not slimy; and they feed upon boughs and wood rather than grass.

167. Why does grief or vexation bring grey hairs?

Because it dries, and age is nothing but dryness.

168. How comes he the most merry that hath the thickest blood?

The blood which is fat and thick makes the spirits firm and constant, wherein consists the force of all Creatures.

169. In your opinion which is hardest, to obtain the love of a person, or to keep it when obtained?

To keep it, by reason of the inconstancy of man, who is quickly angry, and soon weary of a thing; hard to be got, and slippery to keep.

170. Why do serpents shun the herb rue?

Because they are cold, dry, and full of sinews, but the herb rue is of a contrary nature.

171. How comes a capon better to eat than a cock?

The capon loses not its moisture, because he does not tread the hens, and therefore is better.

172. Why do we smell a thing less in the winter than in the summer?

Because the air is thick, and less moveable.

173. How comes hair to burn so quickly as it does?

Because the hair is dry and cold.

174. Why is love compared to a labyrinth?

Because the entry and coming in is easy, and the going out impossible, or very hard.



